MEMORANDUM OF UNDERSTANDING
MOU No. HU656018

MEMORANDUM OF UNDERSTANDING
FOR THE SHARING OF PUBLIC HEALTH DATA
BETWEEN
ARIZONA DEPARTMENT OF HEALTH SERVICES
AND
ARIZONA BOARD OF REGENTS, UNIVERSITY OF ARIZONA

WHEREAS, the Arizona Department of Health Services (ADHS) is a division of the State of Arizona established to promote and protect public health and welfare through the operation of health-related programs within the state;

WHEREAS, increasing collaborations between ADHS and the UNIVERSITY OF ARIZONA (U of A) will further the mission of both agencies and positively impact the health of Arizonans;

WHEREAS, the sharing of Public Health Data with researchers may further the development of evidence-based interventions, provide information for policy changes, and ultimately lead to more effective public health practices;

WHEREAS, ADHS and the U of A recognize the need to set forth and define the terms under which ADHS will provide data files containing Public Health Data to the U of A;

NOW, THEREFORE, in consideration of the mutual promises and representations set forth in this Memorandum of Understanding (MOU), the U of A and ADHS mutually agree as follows:

1. DEFINITIONS. Capitalized terms used herein shall have the meanings set forth in this Section 1

1.1. "Authorized Persons" means U of A employees or contractors who have a need to know or otherwise access the Public Health Data provided to enable the U of A to engage in projects in conformance with the requirements of this MOU and who are bound by writing by confidentiality obligations sufficient to protect Personally Identifying Information in accordance with the terms and conditions of this MOU and applicable law.

1.2. "Hybrid Entity" means a single legal entity: (1) that is a covered entity; (2) whose business activities include both covered and non-covered functions; (3) and that designates health care components in accordance with 45 C.F.R. § 164.105(a)(2)(iii)(D).

1.3. "Public Health Data" means health information organized and maintained by ADHS and received by ADHS under applicable law, including, but not limited to, patient names, mailing addresses, and geocodes, dates of birth and death, gender, race, ethnicity, discharge status, disease codes, procedures performed, and other information reported to ADHS under applicable law. The elements of data shared and specific restrictions of their use under this MOU are fully described in Sections 2.2 (Scope) and 19 (Data Use and Ownership).

1.4. "Personally Identifying Information (PII)" means information provided to the U of A by, or at the direction of, ADHS, including but not limited to Protected Health Information, that:
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1.4.1. Identifies or can be used to identify an individual (including, without limitation, names, signatures, addresses, telephone numbers, e-mail addresses, and other unique identifiers); or

1.4.2. Can be used to authenticate an individual (including, without limitation, employee identification numbers, government-issued identification numbers, passwords or PINs, financial account numbers, credit report information, biometric or health data, answers to security questions, and other personal identifiers) ADHS' business contact information is not by itself deemed to be Personally Identifying Information

1.5 "Protected Health Information (PHI)" means personally identifiable health information, including demographic information or health information, with respect to which there is a) a reasonable basis to believe the information can be used to identify individuals; b) collected, maintained, or stored in any form (electronic or non-electronic); c) relating to the past, present, or future physical or mental health or condition of an individual; the provision of health care to an individual; or the past, present, or future payment for the provision of health care to an individual. This excludes individually identifiable health information in education records covered by the Family Educational Rights and Privacy Act, as amended, 20 U.S.C. 1232g; records described at 20 U.S.C. 1232g(a)(4)(B)(iv); and employment records held by a covered entity in its role as employer.

1.6 "Public Health Practice" means interventions and/or health surveillance designed solely to enhance the well-being of the specific subject population identified in this MOU, and which have reasonable expectation of success.

1.7. "Research" means a systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to generalizable knowledge. Activities that meet this definition constitute research for purposes of this MOU, whether or not they are conducted or supported under a program that is considered research for other purposes. For example, some demonstration and service programs may include research activities.

1.8. "Security Breach" means:

1.8.1. Any act or omission that materially compromises either the security, confidentiality or integrity of PHI or the physical, technical, administrative, or organizational safeguards put in place by the U of A or any Authorized Persons that relate to the protection of the security, confidentiality, or integrity of PHI, or

1.8.2. Receipt of a complaint in relation to the privacy practices of the U of A or any Authorized Persons or a breach or alleged breach of this MOU relating to such privacy practices

2. PURPOSE AND SCOPE OF AGREEMENT

2.1 Purpose

Subject to availability of data and ADHS resources, ADHS agrees to provide the U of A with the Public Health Data identified within section 2.2 subject to all conditions and limitations identified within section 2.2 or in associated exhibits of this MOU.
2.2. Scope

Data elements provided by ADHS to the U of A under this agreement are listed in Table 1, and detailed elements of each data set are attached as Exhibits Section 2.1 notwithstanding, the Parties agree that the U of A does not require, and ADHS shall not provide the U of A (except upon specific request) with public health data containing any of the following information related to any individual:

2.2.1 Signatures, telephone numbers, e-mail addresses;

2.2.2 Employee identification numbers, passwords or PINs, credit report information, answers to security questions, and other similar personal identifiers;

2.2.3 Individual's government-issued identification number (including driver's license number or state-issued identified number); and

2.2.4 Financial account number, credit card number, debit card number, credit report information, with or without any required security code, access code, personal identification number or password, which would permit access to an individual's financial account or accounts.

2.2.5 The selection criteria for each Public Health Data set defined in Exhibit A will be agreed upon by the U of A and ADHS collaboratively, and the applicable selection program or sql code will be attached to the exhibit for each data set as part of this agreement. Once established, changes in the selection criteria must be approved by the steering group that oversees this MOU.

2.2.6 To request data beyond the scope defined in this MOU, the U of A must submit a request in writing to the steering group. Each request must be approved by the steering group before further action is taken. Upon approval, the steering group will notify the ADHS contact identified in section 20 of this MOU and the ADHS HSRB chairperson about the request. The steering group and the ADHS HSRB chairperson shall agree if IRB review is needed and, if so, will agree upon a primary IRB to consider the request. When a required IRB approval is secured for the request, or if an IRB review is not required, the ADHS contact defined in section 20 of this MOU shall be notified for approval, and then the ADHS data owner for final approval.

2.3. Hybrid Entity Status

ADHS and U of A acknowledge that U of A is a Hybrid Entity and, as such, designates "Health Care Components" pursuant to 45 CFR §§ 160.103, 164.103 and 164 105(a)(2)(ii). Notwithstanding any applicable laws that apply to ADHS and uses and disclosures of PHI for research purposes, ADHS and U of A acknowledge that only those designated Health Care Components must comply with applicable HIPAA Privacy, Security, and Breach Notification Rules and other related regulations.

2.4. Steering Group

To manage this MOU, ADHS, and the U of A shall form a steering group comprised of at least two permanent members of ADHS staff and two permanent members of U of A staff. The steering group is responsible for:
2.4.1. Overseeing, maintaining, and reporting to ADHS and the U of A, at least annually, and at most monthly, all authorized users of each shared data set so that new and departing users can be appropriately updated in a timely manner.

2.4.2. Obtaining agreement with the ADHS Human Subjects Chair about whether a project requires human subjects review and, if required, which Institutional Review Board will be responsible for the primary review/approval of each project involving Public Health Data released to the U of A under this MOU, and maintaining a copy of current IRB approvals with the Exhibits for each project as long as each project continues. The Principle Investigator of each project is responsible for securing and providing all IRB approvals to the steering group.

2.4.3. Reviewing and approving or denying all proposals for research/public health activity submitted to the steering group from either the U of A or from ADHS involving Public Health Data under this MOU before any action is taken. Approved actions shall be unanimous. Approved changes, whether to add, modify, or remove data sets and/or approved projects, shall take the form of amendments to the existing MOU and must be submitted to the ADHS Office of Procurement for final approval before implementation.

2.4.4. The process of securing necessary approvals to amend the agreement shall, in general, be coordinated by the steering group through its respective members as follows:

2.4.4.1. Consider the proposed change/project. Steering Group members from the U of A will pursue all inquiries within the University and members from ADHS will pursue all inquiries within ADHS. The objective is to elicit information from the administration, and data owners to determine if there is active interest and available resource to make the proposed change.

2.4.4.2. Upon securing agreement within the steering group, a formal determination of IRB requirement will be undertaken with the ADHS HSRB chair. If required, the IRB review and approval will become the responsibility of the principle investigator of the project including periodic future IRB reviews.

2.4.4.3. Once IRB requirements are satisfied, a draft amendment of the MOU will be submitted to the ADHS data owner, and procurement office for approval.

2.4.4.4. Approved amendment will be sent to the U of A designated contact for signature by the ADHS Procurement Office, and the amendment will be in force once signed by ADHS Procurement.

2.5. Inadvertent Disclosure

In the event that the U of A is inadvertently provided with Public Health Data containing any of the data elements listed in subsection 2.2.1 through 2.2.4, unless included and approved as a specific request, the U of A will notify ADHS in writing of the disclosure and delete or destroy such data files upon ADHS’s written request.
3. INTENDED SUPERSESSION OF PAST AGREEMENTS

This MOU is intended to supersede (replace) the data sharing sections of any MOU in place between the U of A and ADHS for the sharing of Public Health Data included in this MOU.

4. TERM OF THE AGREEMENT

The Term of this MOU shall commence upon signature of both parties and shall continue for a period of five (5) years thereafter, unless terminated, canceled, or extended as otherwise provided herein.

5. CONTRACT EXTENSION

By mutual written contract amendment, this MOU may be extended for a further five (5) years. The total MOU term, including extension, shall not exceed a total of ten (10) years from the effective date of the MOU, unless mutually agreed to by the Parties.

6. TERMINATION

6.1. This MOU remains in effect as provided in Sections 4 and 5 or until the MOU is otherwise terminated under the following terms and conditions:

6.1.1. Termination without Cause

Either ADHS or the U of A may terminate this MOU at any time with thirty (30) calendar days’ notice, in writing, specifying the termination date. Such notices shall be given by personal delivery or by certified mail, return receipt requested.

6.1.2. Termination for Default

Without limiting the rights of the parties elsewhere set forth in this MOU or available under applicable law, if either party breaches its material obligations under this MOU, then the breaching party shall promptly take reasonable steps to cure the violation as may be mutually agreed upon with the non-breaching party to maintain compliance with this MOU. The breaching party shall have thirty (30) days to cure the violation, if curable. If the breaching party has not cured the breach within thirty (30) days to the reasonable satisfaction of the non-breaching party, or if the cure of a breach is not reasonably possible, the non-breaching party may immediately terminate this MOU.

6.1.3. Cancellation for Conflict of Interest

Pursuant to A R S § 38-511, ADHS may cancel this MOU within three (3) years after MOU execution without penalty or further obligation if any person significantly involved in initiating, negotiating, securing, drafting, or creating the MOU on behalf of ADHS is, or becomes at any time while the MOU or an extension of the MOU are in effect, an employee of or a consultant to any other party to this MOU with respect to the subject matter of the MOU. The cancellation shall be effective upon receipt of the written notice of cancellation, unless the notice specifies a later time.
6.1.4. Effect of Termination

The term of this MOU is effective as of the date specified in Section 20. Upon termination, cancellation, expiration or other conclusion of the MOU, U of A will limit its further use or disclosure of that ADHS public health data to those purposes that make return or destruction of that data infeasible. The parties agree that records retention requirements make return or destruction of the data infeasible. U of A will continue to protect the security of any data that is maintained pursuant to the security provisions of this MOU for so long as the data is maintained.

7. SECURITY OF CONFIDENTIAL INFORMATION

7.1 The U of A and the Steering Group shall monitor the use of Public Health Data shared by ADHS under this MOU, including but not limited to PII, and to carefully restrict the use and disclosure of such information as provided for herein.

7.2 Survival of Duty to Protect Confidential Information

It is understood and agreed by the Parties that the obligations set forth in this Section 7 shall survive the expiration or termination of this MOU, except as expressly provided for herein.

7.3 Minimum Safeguards for Protected Health Information

The U of A and the Steering Group shall carefully restrict use and access of ADHS Public Health Data shared under this MOU solely to Authorized Persons and shall ensure that the following minimum safeguards to prevent a Security Breach are implemented in a manner consistent with the requirements of this MOU or applicable law. The U of A and the Steering Group safeguards shall, at the minimum, require that the U of A and its Authorized Persons:

7.3.1. Prohibit Public Health Data supplied under the terms of this MOU from being released or disclosed to anyone not working on the U of A data analysis as an Authorized Person.

7.3.2. Ensure that any Authorized Persons, including any agent or subcontractor to the U of A, to whom the U of A provides Public Health Data shared under this MOU, agrees to the same restrictions and conditions that apply through this MOU to the U of A with respect to such information.

7.3.3. Secure all printouts containing PII or PHI in a locked vault, file cabinet or other method reasonably necessary to protect the PII or PHI.

7.3.4. Store all Public Health Data shared pursuant to this MOU and containing PII or PHI only on secured servers or encrypted devices within the U of A.

7.3.5. The Steering Group shall provide the U of A and ADHS with a description of the security measures that are in place to maintain the confidentiality of each separate data set being received under this MOU. The Steering Group will consider the items described in the document titled "Security Considerations for Applicants" prepared by the ADHS HSRB. (See http://www.azdhs.gov/cps/oacr/documents/HSRB_SecurityChecklist.pdf)
7.3.6 The U of A shall provide the Steering Group and ADHS, on an agreed periodic basis and upon request, with evidence that all Authorized Persons who have access to the Public Health Data shared under this MOU have participated in any required training and signed any documents that are necessary to keep both the U of A and ADHS in compliance with applicable laws.

7.3.7 The Steering Group shall provide or continue to provide the ADHS with a copy of the U of A's procedure for the notification of ADHS of any Security Breach, which shall include a requirement that Authorized Users of the Public Health Data shared under this MOU shall immediately notify a designated individual at the U of A and ADHS of any known or reasonably suspected Security Breach.

7.3.8 The U of A shall maintain a log of all encrypted devices and identification numbers of those devices that are authorized to transmit, receive, or store the Public Health Data shared under this MOU, including the Public Health Data they were authorized to transmit, receive, or store until the data is destroyed. The Steering Group and ADHS may request a copy of the log at any time during the term of the MOU or until the Public Health Data is destroyed.

7.3.9 The U of A shall make clear to all Authorized Persons and other U of A employees with a need to know that the U of A is prohibited from storing Public Health Data on non-encrypted flash drives, CDs, external drives, smartphones, or other non-networked hard drives.

7.3.10 The U of A shall provide the Steering Group and ADHS with proof of either a) the complete destruction of the original data and any copies or subsidiary data sets containing Personally Identifying Information or Protected Health Information that are developed from the original data or b) a statement that destruction of that data infeasible within 30 days after the conclusion of any approved project under this MOU, upon termination of this MOU or at such time that such destruction or return of the data is required by applicable law, whichever is earlier.

7.3.11 The U of A shall take all reasonable steps to ensure that Authorized Persons who have access to the Public Health Data shared under this MOU maintain the same in strict confidence after the termination of this MOU; provided that the U of A's obligations hereunder shall not apply to information that:

7.3.11.1 Was already known to the receiving party prior to the time of first disclosure, as demonstrated by contemporaneous, written documentation; or

7.3.11.2 Is received without any obligation of confidentiality from a third party having a legal right to disclose the same; or

7.3.11.3 Is independently developed by the receiving party by individuals without access to such information, as demonstrated by contemporaneous, written documentation; or

7.3.11.4 Is required to be disclosed by the receiving party pursuant to a legally enforceable order, subpoena, or other regulation (ORDER), provided, however, that the receiving party promptly notifies the disclosing party in advance of such disclosure, and discloses only that information necessary to comply with said ORDER.
7.4. Security Breach

In the event of a Security Breach, pursuant to A.R.S. § 44-7501, the U of A and ADHS agree to collaborate with each other on the investigation, mitigation, remediation, and if necessary, breach notification of citizens. Pursuant to A.R.S. § 41-3507, the U of A and ADHS shall notify the Arizona Strategic Enterprise Technology (ASET) Statewide Information Security and Privacy Office (SISPO) immediately upon becoming aware or receiving notice of a Security Breach.

8. NON-DISCRIMINATION

The Parties shall comply with Executive Order 75-5 as modified by Executive Order 2009-09, which mandates that all persons, regardless of race, color, religion, sex, age, national origin or political affiliation, shall have equal access to employment opportunities, and all other applicable State and Federal employment laws, rules, and regulations, including the Americans with Disabilities Act. The Parties shall take affirmative action to ensure that applicants for employment and employees are not discriminated against due to race, creed, color, religion, sex, national origin, or disability.

9. RECORDS AND RIGHT OF INSPECTION

Under A.R.S. § 35-214 and § 35-215, the U of A shall retain all information other than public health data shared under this MOU and other records ("records") relating to the MOU for a period of five (5) years after the completion of the MOU. All records shall be subject to inspection and audit by ADHS at reasonable times. The U of A shall provide ADHS the right of access to the U of A and those servers or drives used for the storage of Personally Identifying Information and Protected Health Information shared under this MOU, at all reasonable times, in order to monitor and evaluate performance, compliance, and/or quality assurance under this MOU.

10. ARBITRATION

The parties to this MOU agree to resolve all disputes arising out of or relating to this MOU, after exhausting applicable administrative review, through arbitration to the extent required by A.R.S. §12-1518.

11. AMENDMENT OR MODIFICATIONS

No amendment or modifications to this MOU, including any amendment or modification of this Section, shall be effective unless the same is in writing signed by the Parties.

12. ARIZONA LAW

The law of Arizona applies to this MOU including, where applicable, the Uniform Commercial Code as adopted by the State of Arizona.

13. RELATIONSHIP OF PARTIES

The U of A warrants that it is acting as an independent entity under this MOU. Neither party to this MOU shall be deemed to be the employee or agent of the other party to the MOU.

13. SEVERABILITY

The Provisions of this MOU are severable. Any term or condition deemed illegal or invalid shall not affect any other term or condition of the MOU.
14. **NO PAROLE EVIDENCE**

This MOU is intended by the parties to be a final and complete expression of their agreement. No course of prior dealings between the parties and no usage of the trade shall supplement or explain any terms used in this document.

15. **NO WAIVER**

Either Party's failure to insist on strict performance of any term or condition of the MOU shall not be deemed a waiver of that term or condition even if the party accepting or acquiescing in the nonconforming performance knows of the nature of the performance and fails to object to it.

16. **HEADINGS**

Headings are for organizational purposes only and shall not be interpreted as having legal significance or meaning.

17. **ADVERTISING AND PROMOTION OF CONTRACT**

The U of A shall not advertise, publish, or re-release any information for commercial benefit concerning this MOU without the prior written approval of an ADHS Procurement Officer and the ADHS Human Subject Review Board (HSRB). Notwithstanding the above, U of A may without prior consent from ADHS list information related to the Research, including title, amount awarded, Company name, and Investigator(s) names and department(s) affiliation(s) in its annual reports, which while not disseminated, are available to the public.

18. **DATA USE AND OWNERSHIP**

18.1 The U of A will use the Public Health Data exclusively for purposes approved for each data set and shall document and attach the approved purpose for each shared data set in the appropriate exhibits attached to this MOU.

18.2 The U of A must seek approval from the Steering Group and the designated IRB, and shall notify the ADHS HSRB if it is not the designated IRB for the data set involved, before using data for the development of new research studies as defined in this MOU. The U of A or the Steering Group must request a determination from the ADHS HSRB if the data use may be public health practice rather than research.

18.3 The U of A activities using ADHS Public Health Data provided under this MOU that generate external papers, reports, presentations, or publications for dissemination outside of the U of A must be submitted to the ADHS data owner for prior written review and comment before release. The U of A shall allow 30 days for ADHS review.

18.4 ADHS shall be cited as the source of the data in all tables, reports, presentations, and scientific papers, and the U of A or its corresponding authors shall be cited as the source of interpretations, calculations, and/or manipulations of the data.

18.5 ADHS retains exclusive ownership of the Public Health Data shared with the U of A under this MOU. Any release, or modified re-release of Public Health Data shared under this MOU requires prior ADHS approval.
19. **NOTICES, CORRESPONDENCE AND REPORTS**

19.1 Notices, correspondence and reports from to ADHS shall be sent to:

ARIZONA DEPARTMENT OF HEALTH SERVICES  
Bureau Chief, Bureau of Public Health Statistics  
150 N. 18th Avenue, Suite 550  
Phoenix, AZ 85007  
Phone: (602)542-8064

19.2 Notices, correspondence, and reports from ADHS to shall be sent to:

The University of Arizona  
Contract & Research Support Program  
P.O. Box 210158, Rm 515  
Tucson AZ 85721-0158  
Phone: 520-626-3050  
Email: crs-ord@email.arizona.edu

20. **Signatures/Approvals:**

**FOR: Arizona Board of Regents,**  
University of Arizona  

Mark A. Drury, Contracts Manager  
for Government Agreements

11/24/2015  
Date

**FOR: Arizona Department of Health Services:**

Authorized Signature

Rebecca Olivia, Chief Procurement Officer  

11/25/15  
Date

Approved as to Form:  

Andrew Mahler, HIPAA Privacy Officer  

11/24/2015  
Date
MEMORANDUM OF UNDERSTANDING  
MOU No. HU656018

EXHIBIT A – TABLE 1 – PUBLIC HEALTH DATA SHARED UNDER THE MOU

<table>
<thead>
<tr>
<th>DATA SET</th>
<th>PII</th>
<th>PHI</th>
<th>Univ. Principal</th>
<th>Custodial Program</th>
<th>Allowed Purpose</th>
<th>HSRB</th>
<th>Attachments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Marijuana</td>
<td>Y</td>
<td>Y</td>
<td>Keith Boesen</td>
<td>College of Medicine, Tucson, Department of Emergency Medicine</td>
<td>As defined in Exhibit A</td>
<td>Not Applicable</td>
<td>Exhibit B</td>
</tr>
<tr>
<td>Vital Records Births Data</td>
<td>Y</td>
<td>Y</td>
<td>Sydney Rice</td>
<td>Arizona Program for the Surveillance of Developmental Disabilities and Related Conditions</td>
<td>Public Health Surveillance of Birth Defects</td>
<td>Not Applicable</td>
<td>Exhibit C</td>
</tr>
<tr>
<td>Vital Records Death Data</td>
<td>Y</td>
<td>Y</td>
<td>Sydney Rice</td>
<td>Arizona Program for the Surveillance of Developmental Disabilities and Related Conditions</td>
<td>Public Health Surveillance of Birth Defects</td>
<td>Not Applicable</td>
<td>Exhibit C</td>
</tr>
<tr>
<td>Hospital Discharge Data</td>
<td>Y</td>
<td>Y</td>
<td>Sydney Rice</td>
<td>Arizona Program for the Surveillance of Developmental Disabilities and Related Conditions</td>
<td>Public Health Surveillance of Birth Defects</td>
<td>Not Applicable</td>
<td>Exhibit C</td>
</tr>
<tr>
<td>Birth Defects Registry Case File Data</td>
<td>Y</td>
<td>Y</td>
<td>Sydney Rice</td>
<td>Arizona Program for the Surveillance of Developmental Disabilities and Related Conditions</td>
<td>Public Health Surveillance of Birth Defects</td>
<td>Not Applicable</td>
<td>Exhibit C</td>
</tr>
<tr>
<td>Vital Records Births Data</td>
<td>N</td>
<td>Y</td>
<td>Zhao Chen</td>
<td>Mel and Enid Zuckerman College of Public Health Public Health Surveillance Project</td>
<td>Public Health Surveillance Activity</td>
<td>ADHS</td>
<td>Exhibit D</td>
</tr>
<tr>
<td>Vital Records Death Data</td>
<td>N</td>
<td>Y</td>
<td>Zhao Chen</td>
<td>Mel and Enid Zuckerman College of Public Health Public Health Surveillance Project</td>
<td>Public Health Surveillance Activity</td>
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<td>Mel and Enid Zuckerman College of Public Health Public Health Surveillance Project</td>
<td>Public Health Surveillance Activity</td>
<td>ADHS</td>
<td>Exhibit D</td>
</tr>
<tr>
<td>Clinical Laboratory Report Data</td>
<td>N</td>
<td>Y</td>
<td>Zhao Chen</td>
<td>Mel and Enid Zuckerman College of Public Health Public Health Surveillance Project</td>
<td>Public Health Surveillance Activity</td>
<td>ADHS</td>
<td>Exhibit D</td>
</tr>
</tbody>
</table>

*attachments specify which elements of each data set are shared, and may be revised from time to time through amendment of this MOU*
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EXHIBIT B — MEDICAL MARIJUANA DATA

Allowable Purpose:

Data are provided to the U of A for the sole purpose of the production, maintenance, and provision to ADHS of reports on all adverse events related to medical marijuana, and the provision of an annual report of activities and adverse drug events related to medical marijuana as required under ADHS13-028141, Scope of Work — C(10).

Limitations:

All terms and conditions of ADHS13-208141 apply.

Principal Contacts:

Keith Boesen
1295 N. Martin
Drachman Hall Room B308
PO Box 210202
Tucson, AZ 85721
520-626-6230
FX: 520-626-2720
Email: boesen@pharmacy.arizona.edu

Janet Foote, PhD
Assistant Professor
Epidemiology & Biostatistics
Mel & Enid Zuckerman College of Public Health
714 E Van Buren, Suite #115B
Phoenix AZ 85006
(602) 827-2239
jfoote@email.arizona.edu

Frequency of Data Release:

Annually for the annual report in June or July for data. Other data may be requested for specific deliverables under ADHS13-208141 as approved by ADHS.

Selection Criteria:

Annual data set is produced using code below. Other data sets are customized to the specific reporting requirements.

LIBNAME MMP ORACLE PATH="MMP.WORLD" SCHEMA=H166M2 USER=40RAPUSER.
PASSWORD=40RAPSWD. READEBUFF=5000 MULTI_DATASRC_OPT=IN_CLAUSE READ_LOCK_TYPE=NOLOCK
DBINDEX=YES ACCESS=READONLY;
LIBNAME M2 priv licensing\data\licensure\spl\M TABLES';
LIBNAME M3 priv licensing\data\licensure\spl\Annual_UofA';
%LET DSN1=MMP.H166m2_qp_applications;
%LET DSN2=MMP.H166m2_cg_applications;
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%LET DSN3=MMP_h168m2_cards;
%LET DSN4=MMP_H168m2_people;
%LET DSN5=MMP_H168m2_people_to_applications;
%LET DSN6=MMP_H168m2_people_to_cards;
%LET DSN7=MMP_H168m2_DA_APPLICATIONS;
%LET DSN8=MMP_H168m2_DISPENSARIES;
%LET DSN9=MMP_H168m2_DISPENSARY_TRANSACTIONS;
%LET DSN10=MMP_H160V_VALID_TRANSACTIONS;
%LET DSN11=MMP_DISPENSARIES;
%MACRO SETUP(memvar1);
  /*CREATES A STRING VARIABLE WITH SO MANY CHARACTER SPACES*/
  AGEG=''
  AGEG1=''
  AGE=INT((DATE()-DATEPART(BIRTH_DATE))/365.25);
  /*SPECIAL AGE-GROUPS*/
  IF AGE<13 THEN AGEG=' 13 yrs and less';
  IF AGE<15 AND AGE<15 THEN AGEG=' 14-15 yrs';
  IF AGE<17 AND AGE<17 THEN AGEG=' 16-17 yrs';
  IF AGE<19 AND AGE<19 THEN AGEG=' 18-19 yrs';
  IF AGE<21 AND AGE<21 THEN AGEG=' 20-21 yrs';
  IF AGE<23 AND AGE<23 THEN AGEG=' 22-23 yrs';
  IF AGE<25 AND AGE<25 THEN AGEG=' 24-25 yrs';
  IF AGE<30 AND AGE<30 THEN AGEG=' 26-30 yrs';
  IF AGE<35 AND AGE<35 THEN AGEG=' 31-35 yrs';
  IF AGE<40 AND AGE<40 THEN AGEG=' 36-40 yrs';
  IF AGE<45 AND AGE<45 THEN AGEG=' 41-45 yrs';
  IF AGE<50 AND AGE<50 THEN AGEG=' 46-50 yrs';
  IF AGE<55 AND AGE<55 THEN AGEG=' 51-55 yrs';
  IF AGE<60 AND AGE<60 THEN AGEG=' 56-60 yrs';
  IF AGE<65 AND AGE<65 THEN AGEG=' 61-65 yrs';
  IF AGE<70 AND AGE<70 THEN AGEG=' 66-70 yrs';
  IF AGE<75 AND AGE<75 THEN AGEG=' 71-75 yrs';
  IF AGE<80 AND AGE<80 THEN AGEG=' 76-80 yrs';
  IF AGE>80 THEN AGEG=' 81+ yrs';
  /*MONTHLY REPORT AGE-GROUPS*/
  IF AGE<18 THEN AGEG1='<18';
  IF AGE<17 AND AGE<31 THEN AGEG1='18-30';
  IF AGE<30 AND AGE<41 THEN AGEG1='31-40';
  IF AGE<40 AND AGE<51 THEN AGEG1='41-50';
  IF AGE<50 AND AGE<61 THEN AGEG1='51-60';
  IF AGE<60 AND AGE<71 THEN AGEG1='61-70';
  IF AGE<70 AND AGE<81 THEN AGEG1='71-80';
  IF AGE>80 THEN AGEG1='81+';
RUN;
DATA &memvar1;
SET &memvar1;
CREATE=DATEPART(CREATED_ON);
FORMAT CREATE MMDDYY10.;
UPDATE=DATEPART(UPDATED_ON);
FORMAT UPDATE MMDDYY10.;
CRI=YEAR(CREATE); /*YEAR RECORD WAS CREATED*/
UPY=YEAR(UPDATE); /*YEAR RECORD WAS UPDATED*/
CRM=MONTH(CREATE); /*MONTH RECORD WAS CREATED*/
UPM=MONTH(UPDATE); /*MONTH RECORD WAS UPDATED*/
CRL=WKDAY(CREATE); /*DAY OF THE WEEK RECORD WAS CREATED*/
UPL=WKDAY(UPDATE); /*DAY OF THE WEEK RECORD WAS UPDATED*/
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DAYBTW=INTCK('DAY',CREATE,UPDATE); /* DAYS BETWEEN RECORD UPDATES AND RECORD CREATE*/
/** CREATES MONTH AND YEAR VARIABLE FOR REPORT**/
MTH_CR='';
UPD_CR='';
IF CRM=1 AND CYR=2011 THEN MTH_CR='JAN2011';
IF CRM=2 AND CYR=2011 THEN MTH_CR='FEB2011';
IF CRM=3 AND CYR=2011 THEN MTH_CR='MAR2011';
IF CRM=4 AND CYR=2011 THEN MTH_CR='APR2011';
IF CRM=5 AND CYR=2011 THEN MTH_CR='MAY2011';
IF CRM=6 AND CYR=2011 THEN MTH_CR='JUN2011';
IF CRM=7 AND CYR=2011 THEN MTH_CR='JUL2011';
IF CRM=8 AND CYR=2011 THEN MTH_CR='AUG2011';
IF CRM=9 AND CYR=2011 THEN MTH_CR='SEP2011';
IF CRM=10 AND CYR=2011 THEN MTH_CR='OCT2011';
IF CRM=11 AND CYR=2011 THEN MTH_CR='NOV2011';
IF CRM=12 AND CYR=2011 THEN MTH_CR='DEC2011';
IF CRM=1 AND CYR=2012 THEN MTH_CR='JAN2012';
IF CRM=2 AND CYR=2012 THEN MTH_CR='FEB2012';
IF CRM=3 AND CYR=2012 THEN MTH_CR='MAR2012';
IF CRM=4 AND CYR=2012 THEN MTH_CR='APR2012';
IF CRM=5 AND CYR=2012 THEN MTH_CR='MAY2012';
IF CRM=6 AND CYR=2012 THEN MTH_CR='JUN2012';
IF CRM=7 AND CYR=2012 THEN MTH_CR='JUL2012';
IF CRM=8 AND CYR=2012 THEN MTH_CR='AUG2012';
IF CRM=9 AND CYR=2012 THEN MTH_CR='SEP2012';
IF CRM=10 AND CYR=2012 THEN MTH_CR='OCT2012';
IF CRM=11 AND CYR=2012 THEN MTH_CR='NOV2012';
IF CRM=12 AND CYR=2012 THEN MTH_CR='DEC2012';
IF UPM=1 AND UPY=2011 THEN UPD_CR='JAN2011';
IF UPM=2 AND UPY=2011 THEN UPD_CR='FEB2011';
IF UPM=3 AND UPY=2011 THEN UPD_CR='MAR2011';
IF UPM=4 AND UPY=2011 THEN UPD_CR='APR2011';
IF UPM=5 AND UPY=2011 THEN UPD_CR='MAY2011';
IF UPM=6 AND UPY=2011 THEN UPD_CR='JUN2011';
IF UPM=7 AND UPY=2011 THEN UPD_CR='JUL2011';
IF UPM=8 AND UPY=2011 THEN UPD_CR='AUG2011';
IF UPM=9 AND UPY=2011 THEN UPD_CR='SEP2011';
IF UPM=10 AND UPY=2011 THEN UPD_CR='OCT2011';
IF UPM=11 AND UPY=2011 THEN UPD_CR='NOV2011';
IF UPM=12 AND UPY=2011 THEN UPD_CR='DEC2011';
RUN;
%Mend;
DATA QPS1;
SET &DSN1.;
MEMORANDUM OF UNDERSTANDING
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IF APPLICATION_STATUS='VOID' OR APPLICATION_STATUS='WITHDRAWN' THEN DELETE;
IF APPLICATION_TYPE='NEW';

%SETUP (QPS1);
DATA CGs1;
SET &DSN2.;
   IF APPLICATION_STATUS='VOID' OR APPLICATION_STATUS='WITHDRAWN' THEN DELETE;
   IF APPLICATION_TYPE='NEW';

%SETUP (CGs1);
proc sql _method outobs=max feedback SORTMSG;
create table THREE as
select D.PERSON_ID, D.LAST_NAME, D.FIRST_NAME, D.MIDDLE_NAME, D.SUFFIX, D.BIRTH_DATE,
D.GENDER, D.EXTERNAL_ID, D.EXTERNAL_ID_STATE, D.EXTERNAL_ID_TYPE, D.ISSUED_DATE,
D.CREATED_BY,
D.CREATED_ON, D.UPDATED_BY, D.UPDATED_ON, E.CARD_ID, E ENTITY_TYPE
from &DSNH. d left join &DSNH. e
on d.person_id=e.person_id
where datepart(d.issued_date)<=intnx('month',today(),-1,'end')
order by issued_date;
quit;

proc sql _method outobs=max feedback SORTMSG;
create table M2.ACARDS as
select A.*, C.RESIDENCE_ADDRESS, C.RESIDENCE_CITY, C.RESIDENCE_COUNTY,
C.RESIDENCE_ZIP, C.EMAIL,
C.PHONE_NUMBER, C.ISSUE_DATE, C.EXPIRATION_DATE, C.CARD_STATUS, C.PRINT_STATUS,
C.AUTHORIZED_TO_CULTIVATE, C.PATIENT_CARD_ID, C.APPLICATION_ID, C.RESIDENCE_STATE,
C.PRINTED_ON,
C.MAILING_ADDRESS, C.MAILING_CITY, C.MAILING_STATE, C.MAILING_ZIP, C.LOCKED_BY,
C.LOCKED_ON,
C.BATCH_ID, C.PRINTED_BY, C.DISPENSARY_ID, C.DISPENSARY_NAME_ONE,
C.DISPENSARY_NAME_TWO, C.IS_REPLACED,
C.REPLACEMENT_CARD_ID, C.RENEWAL_STATUS, C.ATTN_CODE, C.DA_ACCESS_CODE,
C.DA_ACCESSED_ON, C.DISPENSARY_EMAIL,
C.DISPENSARY_CERTIFICATE_ID, C.IS_DISPENSARY_MEMBER
from work.THREE a left join &DSNH. c
on a.card_id=c.card_id
where c.card_status='ACTIVE'
order by created_on;
quit;

/* Gets rid of the duplicates on person_id and entity_type */
PROC SORT DATA=M2.ACARDS NODUPKEY OUT=FINAL DUPOUT=FINALDUPS;
   BY PERSON_ID ENTITY_TYPE; /* ADDING ENTITY_TYPE IS KEY */
RUN;

PROC SORT DATA=FINAL:
   BY PERSON_ID CARD_ID;
RUN;

proc sql _method outobs=max feedback SORTMSG;
create table UcfA_FINAL as
select a.*, B.APPLICATION_TYPE, B.HOMELESS, B PHYSICIAN_NAME, B PHYSICIAN_ADDRESS,
B PHYSICIAN_CITY,
B PHYSICIAN_STATE, B PHYSICIAN ZIP, B PHYSICIAN_PHONE, B PHYSICIAN_LICENSE_NUMBER,
B PHYSICIAN_LICENSE_STATE,
B PHYSICIAN_SPECIALIZATION, B REQUESTTOGROW, B CLINICAL STUDIES, B CAREGIVER,
B QHC CANCER, B QHC GLAUCOMA, B QHC HIV,
B QHC AIDS, B QHC HEPC, B QHC SCLEROSIS, B QHC CROHNS, B QHC CACHEXIA, B QHC CHRONIC,
B QHC NAUSEA, B QHC SEIZURES,
B QHC MUSCLESPASMS, B SUBMISSION_STATUS, B PAYMENT_STATUS, B APPLICATION_STATUS,
B SNAP_ELIGIBLE, B PHYSICIAN_SEC_NAME,
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B.PHYSICIAN_SEC_ADDRESS, B.PHYSICIAN_SEC_CITY, B.PHYSICIAN_SEC_STATE,
B.PHYSICIAN_SEC_PHONE, B.PHYSICIAN_SEC_LICENSE_NUMBER, B.PHYSICIAN_SEC_LICENSE_STATE,
B.PHYSICIAN_SEC_SPECIALIZATION, B.QHC_ALZHEIMERS, B.NEW_LAST_NAME,
B.NEW_FIRST_NAME, B.NEW_MIDDLE_NAME, B.NEW_SUFFIX, B.NEW_HOMELESS,
B.NEW_RESIDENCE_ADDRESS, B.NEW_RESIDENCE_CITY,
B.NEW_RESIDENCE_STATE, B.NEW_RESIDENCE_ZIP, B.NEW_RESIDENCE_COUNTY,
B.NEW_MAILING_ADDRESS, B.NEW_MAILING_CITY,
B.NEW_MAILING_STATE, B.NEW_MAILING_ZIP, B.NEW_RESIDENTIAL_MAILING,
B.NEW_REQUESTTOGROW, B.NEW_CAREGIVER, B.QHC_SPECIFIC_CONDITION,
B.ADHS_SNAP_ELIGIBLE, B.OLD_CARD_ID, B.TIMEFRAME_START_DATE, B.TIMEFRAME_AGE,
B.TIMEFRAME_DUE_DATE, B.TIMEFRAME_ADHS_CLOCK,
B.TIMEFRAME_APPICANT_CLOCK, B.EFFECTIVE_DATE_NAME, B.EFFECTIVE_DATE_ADDRESS,
B.NEW_EMAIL, B.OLD_APPLICATION_ID, B.NEW_GENDER,
B.RENEWAL.CG_ACTION, B.RENEWAL_APP_DATE, B.PROCESSING_TYPE, B.CURRENT.CG_ID,
B.PRIMARY:PHYSICIAN_ID, B.SECONDARY:PHYSICIAN_ID,
B.MATCHING_CRITERIA, B.PHYSICIAN_MATCHED_BY, B.PHYSICIAN_MATCHED_DATE, B.QHC_PTS_D,
B.PRIMARY:PHYSICENSE_DATE, B.SECONDARY:PHYSICENSE_DATE, B.AGE, B.AGEG1, B.AGE, B.CREATE, B.UPDATE, B.CRY,
B.URY, B.CRM, B.URY, B.CRM, B.URY, B.DAYBTM,
B.MTH_CR, B.UPD_CR
from work.final a left join work:qpsl b
on a.application_id = b.application_id;
quit;
proc sql _method=outs=max feedback sortmsg;
create table UofA_FINAL2 as
select a.*, B.PATIENT_APPLICATION_ID, B.RESIDENTIAL_MAILING, B.SSN, B.CARD_NUMBER,
B.CAREGIVER_PAREN_GUARDIAN,
B.CAREGIVER_FINGERPRINT, B.FINGERPRINT_STATUS, B.DATE_FINGERPRINT_RECEIVED,
B.FINGERPRINT_CARD_ID, B.ADHS_FINGERPRINT_REQUIRED, B.CAREGIVER_EFFECTIVE_DATE,
B.RENEWAL_TICKET_ID
from work.UofA_final a left join work:qps1 b
on a.application_id = b.application_id;
quit;
"* FINAL is all active person/cards of all types. Can join FINAL and UofA_Qps or
UofA_CGs tables using applicationid */
/*CREATING A NEW DATASET FOR UNIVERSITY OF ARIZONA FOR ANNUAL REPORT WITHOUT
IDENTIFIERS*/
DATA M3.D_ID_UofA_FINAL;
SET UofA_FINAL2;
DROP LAST_NAME FIRST_NAME MIDDLE_NAME SUFFIX EXTERNAL_ID EXTERNAL_ID_STATE
EXTERNAL_ID_TYPE
  ISSUED_DATE RESIDENCE_ADDRESS MAILING_ADDRESS MAILING_CITY MAILING_STATE
MAILING_ZIP
  RESIDENTIAL_MAILING EMAIL PHONE_NUMBER PHYSICIAN_NAME PHYSICIAN_ADDRESS
PHYSICIAN_PHONE
  PHYSICIAN_LICENSE_NUMBER UPDATED_BY PHYSICIAN_SEC_NAME PHYSICIAN_SEC_ADDRESS
PHYSICIAN_SEC_CITY
  PHYSICIAN_SEC_STATE PHYSICIAN_SEC_ZIP PHYSICIAN_SEC_PHONE
PHYSICIAN_SEC_LICENSE_STATE
  PHYSICIAN_SEC_SPECIALIZATION PHYSICIAN_SEC_LICENSE_NUMBER NEW_LAST_NAME
NEW_FIRST_NAME NEW_MIDDLE_NAME
  NEW_SUFFIX NEW_HOMELESS NEW_RESIDENCE_ADDRESS NEW_RESIDENCE_ZIP
NEW_RESIDENCE_CITY NEW_RESIDENCE_COUNTY
  NEW_RESIDENCE_STATE NEW_MAILING_ADDRESS NEW_RESIDENTIAL_MAILING NEW_MAILING_CITY
NEW_MAILING_STATE
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NEW MAILING ZIP NEW REQUEST TO GROW NEW CAREGIVER OLD CARD ID EFFECTIVE DATE NAME
EFFECTIVE DATE ADDRESS
NEW EMAIL OLD APPLICATION ID NEW GENDER RENEWAL CG ACTION RENEWAL APP DATE
CURRENT CG ID CARD ID
REPLACEMENT CG ID OLD CARD ID LOCKED BY OLD APPLICATION ID PATIENT CARD ID
APPLICATION ID PRINTED BY
CREATED BY RESIDENCE CITY RESIDENCE ZIP LOCKED ON BATCH ID DISPENSARY ID
DISPENSARY NAME ONE
DISPENSARY NAME TWO PHYSICIAN CITY PHYSICIAN STATE PHYSICIAN ZIP
TIMEFRAME START DATE
TIMEFRAME START DATE TIMEFRAME AGE TIMEFRAME DUE DATE TIMEFRAME APPLICANT CLOCK
TIMEFRAME ADMS CLOCK
PROCESSING TYPE SSN;
RUN;

proc sql _method outcbs=max feedback SORTMSG;
create table M3.TREAT as
select e.*, b.chaa_id, b.dispensary_status, b.physical_county, b.physical_state
from &DSN9. a left join &DSN9. b
on a.dispensary_id=b.dispensary_id
where mdy(07,01,2014)<=datepart(transaction_date)<=intnx('month',today(),-1,'end');
quit;
MEMORANDUM OF UNDERSTANDING
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EXHIBIT C -- VITAL RECORDS BIRTH, DEATH, HOSPITAL DISCHARGE,
AND BIRTH DEFECTS REGISTRY CASE FILE DATA FOR BIRTH DEFECTS
SURVEILLANCE

Allowable Purpose:

Data are provided to the U of A Arizona Program for the Surveillance of Developmental Disabilities and Related
Conditions for the sole purpose of conducting surveillance of birth defects in Arizona, and to produce, maintain,
and provide to ADHS confidential case reports of infants that may have been missed by the ADHS Birth Defects
Surveillance program, and twice annual reports of ADHS-identified infants who are receiving Children’s
Rehabilitative Services as required under AGR2012-027, 14. Scope of Work, sections A and B. Prior Agreement
terms and conditions are found in attached

Limitations on Data Use:

All terms and conditions of AGR2012-027 apply.

Principal Contacts:

Dr. Sydney Rice
Department of Pediatrics
University of Arizona
1501 N. Campbell Ave.
Tucson, AZ 85724-5073

University of Arizona
Office of Research and Contract Analysis
888 N. Euclid Ave., Room 515
Tucson, AZ 85719
520-626-3050
Attn. Lewis Barbieri, Director

Frequency of Data Release:

As requested by the U of A

Selection Criteria:

As defined by the U of A with each request.
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EXHIBIT D - VITAL RECORDS BIRTH, DEATH, HOSPITAL DISCHARGE, AND CLINICAL LABORATORY FOR PUBLIC HEALTH SURVEILLANCE

Allowable Purpose:

Data are provided by ADHS to U of A MEZCoPH Surveillance Project for the sole purpose of conducting public health surveillance. Specific projects in which data will be used must be approved by ADHS prior to data release.

Limitations on Data Use:

Data will generally be de-identified. If an approved project will utilize data identifiers (such as geographic identifiers, or named data), then the project must be reviewed and approved by the ADHS IRB.

Principal Contacts:

Mel and Enid Zuckerman College of Public Health
Roy P. Drachman Hall
1295 N. Martin Ave.
PO Box 245211
Tucson, AZ 85724-5211
Attn. Zhao Chen, PhD MPH

Frequency of Data Release:

As agreed by ADHS and the U of A on a project by project basis.

Selection Criteria:

As agreed by ADHS and the U of A on a project by project basis.
MEMORANDUM OF UNDERSTANDING
MOU No. HU656018
AMENDMENT# 1

EXHIBIT E

ARIZONA PREHOSPITAL INFORMATION EMERGENCY MEDICAL SERVICES
REGISTRY SYSTEM (AZ-PIERS)

Allowable Purpose:
Data are allowed to be exchanged by ADHS and the University of Arizona for conducting public health practice, surveillance, and research. Specific projects must be approved as described in this MOU.

Limitations on Data Use:
Data may only be used as described above, no identifiable information may be published, no contact may be attempted with agencies or individuals unless approved as described above.

Principle Contacts:
Arizona Department of Health Services
Bureau Chief, Bureau of EMS and Trauma System
150 N 18th Avenue, Suite 540
Phoenix, AZ, 85007
Phone: (602) 364-3149

Frequency of Data Release:
Yearly, after the data file has been closed, cleaned, and finalized, typically by the first day of August.

Selection Criteria:
As agreed by ADHS and the U of A on a project by project basis (see attached list for full data set).
MEMORANDUM OF UNDERSTANDING
MOU No. HU656018
AMENDMENT# 1

EXHIBIT F

ARIZONA TRAUMA REGISTRY SYSTEM (ASTR)

Allowable Purpose:
Data are allowed to be exchanged by ADHS and the University of Arizona for conducting public health practice, surveillance, and research. Specific projects must be approved as described in this MOU.

Limitations on Data Use:
Data may only be used as described above, no identifiable information may be published; no contact may be attempted with agencies or individuals unless approved as described above.

Principal Contacts:
Arizona Department of Health Services
Bureau Chief, Bureau of EMS and Trauma System
150 N 16th Avenue, Suite 540
Phoenix, AZ, 85007
Phone: (602) 364-3149

Frequency of Data Release:
Yearly, after the data file has been closed, cleaned, and finalized, typically by the first day of August.

Selection Criteria:
As agreed by ADHS and the U of A on a project by project basis (see attached list for full data set).
Memorandum of Understanding
MOU No. HU656018
Amendment #1

EXHIBIT G

Arizona State Immunization Information System (ASII)

Allowable Purpose:
Data are allowed to be exchanged by ADHS and the University of Arizona as part of the Health Start Program Evaluation project. All other projects or uses must be approved as described in this MOU.

Limitations on Data Use:
Data may only be used for the Health Start evaluation project. No identifiable information may be published, and no contact may be attempted with agencies or individuals contained in the data shared under this MOU unless approved by ADHS.

Principal Contacts:
Arizona Department of Health Services
Arizona Immunization Program Office
150 N 18th Avenue, Suite 120
Phoenix, AZ, 85007
Phone: (677) 491-5741

Frequency of Data Release:
As requested by the U of A Center for Population Science and Discovery.

Selection Criteria:
Immunization records for individuals selected who were ever enrolled in the Health Start program. The following fields must be provided to generate the immunization data file:

- First Name
- Middle Name
- Last Name
- Date of Birth (mm/dd/yyyy)
- Street address
- City
- State
- Zip code
- Guardian first name
- Guardian last name
- Health Start Unique Client ID

Immunization Records containing the following fields will be produced for exact matches ('restrictive' matches), and high probability matches ('non-restrictive' matches):

Non-Date Fields:
AHCCCS_ID
LNAME
FNAME
DOB
VARICELLA CONTRAINDICATION
ASIIS PATIENT ID

Immunization date fields below:

DTP1  DTP2  DTP3  DTP4
DTP5  DTP6  DTP7  DTP8
IPV1  IPV2  IPV3  IPV4
IPV5  HEP1  HEP2  HEP3
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<td>VZV2</td>
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MEMORANDUM OF UNDERSTANDING
MOU No. HU656018
AMENDMENT# 1

EXHIBIT H

HEALTH START DATA

Allowable Purpose:
Data are allowed to be exchanged by ADHS and the University of Arizona as part of the Health Start Program Evaluation project. All other projects or uses must be approved as described in this MOU.

Limitations on Data Use:
Data may only be used for the Health Start evaluation project. No identifiable information may be published, no contact may be attempted with agencies or individuals unless approved as described above.

Principal Contacts:
Arizona Department of Health Services
Bureau of Women's and Children's Health
Arizona Department of Health Services
Office. 602-364-1419

Frequency of Data Release:
As requested by the U of A Center for Population Science and Discovery.

Selection Criteria:
All enrollee data will be shared with the U of A Center for Population Science and Discovery. The following selected fields will be shared with the ADHS Immunization program so that Health Start enrollee immunization records may be selected and released to the U of A Center for Population Science and Discovery as part of this evaluation project. The following fields must be provided to the ADHS Immunization office to generate the immunization data file:

- First Name
- Middle Name
- Last Name
- Date of Birth (mm/dd/yyyy)
- Street address
- City
- State
- Zip code
- Guardian first name
- Guardian last name
- Member ID

Immunization Records containing the following fields will be produced for exact matches ('restrictive' matches), and high probability matches ('non-restrictive' matches) for release to the U of A Center for Population Science and Discovery by the ADHS Immunization Office:

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<th>FNAME</th>
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</tr>
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<td>HIB2</td>
<td>HIB3</td>
</tr>
<tr>
<td>HIB4</td>
<td>HIB5</td>
<td>MMR1</td>
<td>MMR2</td>
</tr>
<tr>
<td>MMR3</td>
<td>VZV1</td>
<td>VZV2</td>
<td>PCV7-1</td>
</tr>
<tr>
<td>PCV7-2</td>
<td>PCV7-3</td>
<td>PCV7-4</td>
<td>PCV7-5</td>
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</tbody>
</table>
MEMORANDUM OF UNDERSTANDING
MOU No. HU656018
AMENDMENT# 1

4
PCV13-5
3
PPV23-4
ROTA4

ROTA1
ROTARIX1

ROTARIX3
HPV1
MCV4-1

MPSV4-2
HEPA1
INFLUENZA1

INFLUENZA4
INFLUENZA5
H1N13
TDAP3

TDAP4

VARICELLA CONTRAINDICATION

ASIIS PATIENT ID

The following code will be used to select the data for release:

libname hs "F:\Health Start\U of AISAS";
data dater;
   start_date=MDY(01,01,2000);
   end_date=MDY(12,31,2014);
   call symput(’SDATE’ start_date);
   call symput(’EDATE’ end_date);
run;

data mother ;
   set hs.names_info_address (keep= client_id first_name last_name middle name_id
   dob street city zipcocie county state rename=(first_name=mother_fname
   last_name=mother_name middle=mother_mname dob=m_dob));
run;

data mother ;
   set mother ;
   if client_id not in (13435, 14779, 14161, 10001, 15130, 14310);
run;
proc sort data=mother nodupkey out=undup_clients dupout=dup_clients;
   by client_id ;
run;

data child ;
   set hs.enroll_child (keep= client_id enroll_id enroll_date child_id first_name
   last_name middle_name dob race gender birth_cert father_name);
run;

data child ;
   set child ;
   if client_id not in (13435, 14779, 14161, 10001, 15130, 14310);
run;
proc sort data=undup_clients ;
   by client_id ;
run;
proc sort data=child ;
   by client_id;
run;
data merge1 mother1 child1 ;
   merge undup_clients (in = a ) child (in=b) ;
   if A and B then output merge1; /*both match*/
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AMENDMENT# 1

else if B and not A then output child1; /* child not match*/
else if A and not B then output mother1; /*mother not match*/
by client_id;
run;
data final;
set merge1;
where &SDATE.<=datepart(enroll_date)<=&EDATE ;
run;
data mother2;
set hs.mother (keep= id fname lname M1 maidenname dob line1 zipcode county
state rename=(fname=mother_fname lname=mother lname m=mother_mname
maidenname=M_maidenname dob=m_dob));
run;
proc sort data=mother2 nodupkey out=undup_clients2 dupout=dup_clients2;
by id;
run;
data child2;
set hs.enroll_child2 (keep= id dencounter fname lname dob sex:);
where &SDATE.<=datepart(dencounter)<=&EDATE;
run;
proc sort data=undup_clients2 ;
by id;
run;
proc sort data=child2 ;
by id;
run;
data merge2 mother3 child3 ;
merge undup_clients2 (in = a ) child2 (in=b);
if A and B then output merge2 ; /*both match*/
else if B and not A then output child3 ; /* child not match*/
else if A and not B then output mother3 ; /*mother not match*/
by id;
run;
data final_health_start;
set merge1 merge2;
run;

Signatures/Approvals:

FOR: Arizona Board of Regents, University of Arizona

Melissa Kramar, Contract Officer

Date: 9/10/16

FOR: Arizona Department of Health Services:

Rebecca O'Brien, Chief Procurement Officer

Date: 6-14-16

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## EXHIBIT A – TABLE 1 – PUBLIC HEALTH DATA SHARED UNDER THE MOU

<table>
<thead>
<tr>
<th>DATA SET</th>
<th>PII</th>
<th>PHI</th>
<th>Univ. Principal</th>
<th>Custodial Program</th>
<th>Allowed Purpose</th>
<th>HSRB</th>
<th>Attachments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Marijuana</td>
<td>Y</td>
<td>N</td>
<td>Keith Boesen</td>
<td>College of Medicine, Tucson, Department of Emergency Medicine</td>
<td>As defined in Exhibit A</td>
<td>Not Applicable</td>
<td>Exhibit B</td>
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<tr>
<td>Vital Records Births Data</td>
<td>Y</td>
<td>Y</td>
<td>Sydney Rice</td>
<td>Arizona Program for the Surveillance of Developmental Disabilities and Related Conditions</td>
<td>Public Health Surveillance of Birth Defects</td>
<td>Not Applicable</td>
<td>Exhibit C</td>
</tr>
<tr>
<td>Vital Records Death Data</td>
<td>Y</td>
<td>Y</td>
<td>Sydney Rice</td>
<td>Arizona Program for the Surveillance of Developmental Disabilities and Related Conditions</td>
<td>Public Health Surveillance of Birth Defects</td>
<td>Not Applicable</td>
<td>Exhibit C</td>
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<tr>
<td>Hospital Discharge Data</td>
<td>Y</td>
<td>Y</td>
<td>Sydney Rice</td>
<td>Arizona Program for the Surveillance of Developmental Disabilities and Related Conditions</td>
<td>Public Health Surveillance of Birth Defects</td>
<td>Not Applicable</td>
<td>Exhibit C</td>
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<tr>
<td>Birth Defects Registry Case File Data</td>
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<td>Arizona Program for the Surveillance of Developmental Disabilities and Related Conditions</td>
<td>Public Health Surveillance of Birth Defects</td>
<td>Not Applicable</td>
<td>Exhibit C</td>
</tr>
<tr>
<td>Vital Records Births Data</td>
<td>Y</td>
<td>N</td>
<td>Zhao Chen</td>
<td>Mel and Enid Zuckerman College of Public Health Public Health Surveillance Project</td>
<td>Public Health Surveillance Activity</td>
<td>ADHS</td>
<td>Exhibit D</td>
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<td>Zhao Chen</td>
<td>Mel and Enid Zuckerman College of Public Health Public Health Surveillance Project</td>
<td>Public Health Surveillance Activity</td>
<td>ADHS</td>
<td>Exhibit D</td>
</tr>
<tr>
<td>Hospital Discharge Data</td>
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<td>N</td>
<td>Zhao Chen</td>
<td>Mel and Enid Zuckerman College of Public Health Public Health Surveillance Project</td>
<td>Public Health Surveillance Activity</td>
<td>ADHS</td>
<td>Exhibit D</td>
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<tr>
<td>Clinical Laboratory Report Data</td>
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<td>N</td>
<td>Zhao Chen</td>
<td>Mel and Enid Zuckerman College of Public Health Public Health Surveillance Project</td>
<td>Public Health Surveillance</td>
<td>ADHS</td>
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# MEMORANDUM OF UNDERSTANDING
**MOU No. HU656018**
**AMENDMENT# 2**

<table>
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<th>Attachments</th>
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<td>Arizona Prehospital Information</td>
<td>Y</td>
<td>Y</td>
<td>Will Humble</td>
<td>Health Surveillance Project</td>
<td>Research, Public Health Surveillance, and Evaluation</td>
<td>ADHS</td>
<td>Exhibit E</td>
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<td>Emergency Medical Service Registry System</td>
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<td>Center for Population Science and Discovery</td>
<td>Research, Public Health Surveillance, and Evaluation</td>
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<tr>
<td>(AZ PIERs)</td>
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<td>Arizona Trauma Registry System</td>
<td>Y</td>
<td>Y</td>
<td>Will Humble</td>
<td>Health Surveillance Project</td>
<td>Research, Public Health Surveillance, and Evaluation</td>
<td>ADHS</td>
<td>Exhibit F</td>
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<tr>
<td>(ASTR)</td>
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<td>Center for Population Science and Discovery</td>
<td>Research, Public Health Surveillance, and Evaluation</td>
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<td>Arizona State Immunization Information System</td>
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<td>Y</td>
<td>Will Humble</td>
<td>Health Surveillance Project</td>
<td>Health Start Evaluation Project</td>
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<td>Exhibit G</td>
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<td>Health Start Evaluation Project</td>
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<tr>
<td>Arizona Health Start Data</td>
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<td>Y</td>
<td>Will Humble</td>
<td>Health Surveillance Project</td>
<td>Health Start Evaluation Project</td>
<td>ADHS</td>
<td>Exhibit H</td>
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<td>Center for Population Science and Discovery</td>
<td>Health Start Evaluation Project</td>
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*attachments specify which elements of each data set are shared, and may be revised from time to time through amendment of this MOU*

**Signatures/Approvals:**

**FOR: Arizona Board of Regents, University of Arizona**

[Signature]

Mark A. Drury, Contracts Manager for Government Agreements

**FOR: Arizona Department of Health Services:**

[Signature]

Mr. Tracey Thomas
Acting Chief Procurement Officer

8/26/2016

Date