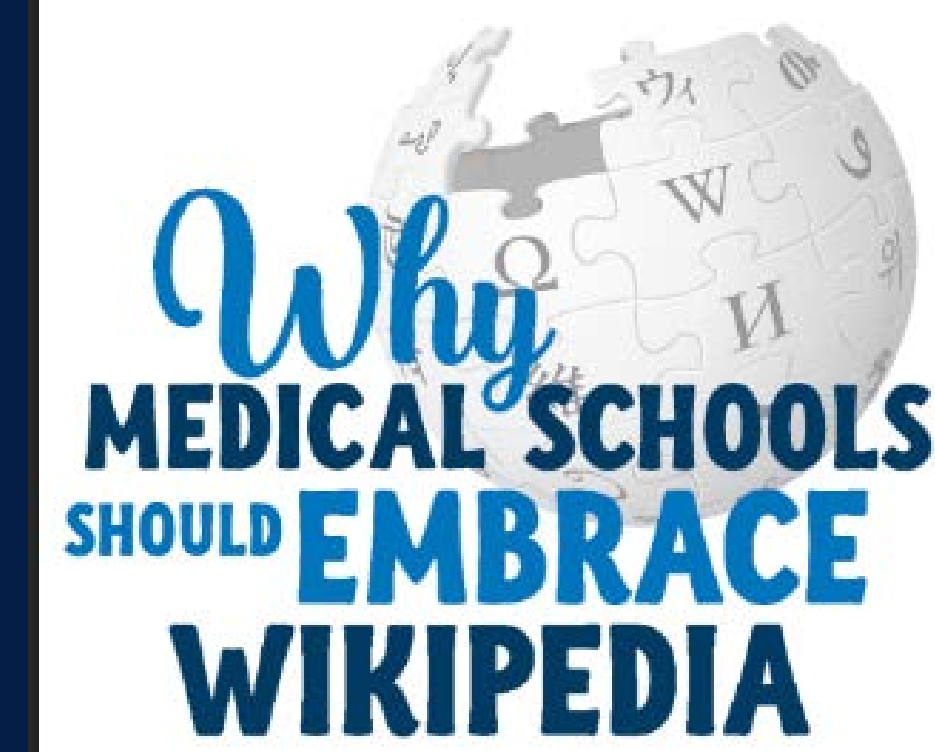


Editing Wikipedia for medical school credit – results from four cycles of an elective for fourth-year students

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Abstract

Problem

- At the end of 2013, Wikipedia's medical content was made up of more than 155,000 articles across more than 255 languages, and supported by more than 950,000 references¹.
- At least **94% of medical students use Wikipedia** as an information source², yet we do not train them to use this popular resource critically or contribute to its overall value³.
- We feel that **this is a lost opportunity** for our learners and Wikipedia's global audience⁴.

Approach

- Beginning in Fall 2013, we offered a month-long immersion elective rotation for fourth-year medical students to receive academic credit for editing Wikipedia⁵.
- Faculty and medical librarians joined existing partnerships to design, deliver and evaluate the course.
- We sought to answer three key questions: 1) the impact of the student edits on Wikipedia's content, 2) the impact of the course on student participants, and 3) the number of readers of the articles edited by our students.

Lessons Learned

- Our first 43 students:
 - contributed 493,994 bytes of content (average of 11,488/student)
 - made 1,528 edits (average 36/student)
 - added a net 274 references
- The change in number of references cited ranged from subtracting 64 to adding 66 references (average of +7 references/student).
- From the start of the project until the publication of a review at three years, none of the contributions of the first 28 students had been reversed or vandalized.
- Highlights of student feedback include:
 - all subjectively felt they improved their selected articles
 - all enjoyed the opportunity to "give back specifically" to Wikipedia
 - nearly all broadened their sense of the scope of physician responsibilities in our socially networked information era
- During only the months that students were actively editing, Wikipedia traffic statistics indicate the 43 articles were collectively viewed 1,116,065 times.
- Subsequent to students' efforts, these 43 articles have been viewed over 22 million times.

Significance

- These results confirm the viability and large social impact of medical students receiving academic credit for contributing to Wikipedia and other open-access repositories of medical knowledge⁶.
- We encourage other health professional schools to replicate and improve on our initiative.

Partnerships

Class	Criteria	Reader's experience	Editing suggestions	Example
FA	The article has attained featured article status by passing an official review. More detailed criteria	Professional, outstanding, and thorough, a definitive source for expert's information. [how]	No further content additions should be necessary unless new information becomes available, further improvements to the prose quality are other possible. [how]	Tourette syndrome
GA	The article is well organized and essentially complete, having been reviewed by impartial reviewers from the WikiProject or elsewhere. Good article status is not a requirement for A-Class. More detailed criteria	Very useful to readers. A fairly complete treatment of the subject. A newcomer to the subject would typically find nothing wanting. [how]	Expert knowledge may be needed to break the article, and any problems may need solving. There may be too much. [how]	Not currently used by the project
GA	The article has attained good article status by passing an official review. More detailed criteria	Useful to nearly all readers, with no obvious problems, approaching (but not equaling) the quality of a professional encyclopedia. [how]	Some editing by subject and style experts is helpful; comparison with an existing featured article on a similar topic may highlight areas where content is weak or missing. [how]	Common cold
B	The article is mostly complete and without major problems, but requires some further work to reach good article standards. More detailed criteria	Readers are not left wanting, although the content may not be complete enough to satisfy a serious student or researcher. [how]	A few aspects of content and style need to be addressed. Expert knowledge may be needed. The inclusion of supporting material should also be considered if practical, and the article checked for general compliance with the Manual of Style and related core guidelines. [how]	Tuberculous meningitis
C	The article is substantial, but is still missing important content or contains much irrelevant material. The article should have some references to reliable sources, but may still have significant problems or require substantial cleanup. More detailed criteria	Useful to a casual reader, but would not provide a complete picture for even a moderately detailed study. [how]	Considerable editing is needed to close gaps in content and solve obvious problems. [how]	Saint of Langerhans
Start	An article that is developing, but which is quite incomplete. It might or might not cite adequate reliable sources. More detailed criteria	Provides some meaningful content, but most readers will need more. [how]	Providing references to reliable sources should come first; the article also needs substantial improvement on content and organization. Also improve the grammar, spelling, writing style and improve the layout. [how]	ADD-related symptoms
Stub	A very basic description of the topic. However, all very-bad-quality articles will fall into this category. More detailed criteria	Provides very little meaningful content, but will fill more than a dictionary definition. Readers may proceed with modifications developed features of the topic and does not see how the features of the topic are significant. [how]	Any editing or additional material can be helpful. The provision of meaningful content should be a priority. The best solution for stub-class articles is to merge up to a Start-class article to add in referenced reasons of why the topic is significant. [how]	Acute care

"I feel good giving back to Wikipedia"

Prioritize the highest impact articles needing improvement

Label	Top priority	High priority	Mid priority	Low priority
Criteria	Subject is extremely important, even crucial, to modern medicine. Strong interest from non-professionals around the world. Usually a large subject with many associated sub-articles. Less than 1% of medicine-related articles achieve this rating.	Subject is clearly notable. Subject is interesting to, or directly affects, many average readers. This category includes the most common diseases and treatments as well as major areas of specialization. Fewer than 10% of medicine-related articles achieve this rating.	Normal priority for article improvement. A good article would be interesting or useful to many readers. Subject is notable within its particular specialty. This category includes most of the following: very rare diseases, lesser-known medical signs, equipment, hospitals, individuals, historical information, publications, laws, investigational drugs, detailed genetic and physiological information, and obscure anatomical features.	Article may only be included to cover a specific part of a more important article, or may be only loosely connected to medicine. Subject may be specific to one country or part of one country, such as licensing requirements or organizations. This category includes most of the following: very rare diseases, lesser-known medical signs, equipment, hospitals, individuals, historical information, publications, laws, investigational drugs, detailed genetic and physiological information, and obscure anatomical features.
Examples	Tuberculosis or Cancer	Coriolic disease or Mastectomy	Cholangiocarcinoma or Cramp	Leopard syndrome or Flynn effect

"It's hard to delete other people's work."

Quality	Importance					
	Top	High	Mid	Low	NA	???
★ FA	10	16	19	17		
★ FL		2	2	6		
★ FM					42	
⊕ GA	26	29	64	72		
B	33	335	862	752		
C	18	308	1,619	1,771	69	
Start		270	3,634	7,654	360	
Stub		7	2,305	6,222	269	
List		19	242	201	16	

"It's challenging to edit live instead of in my sandbox."



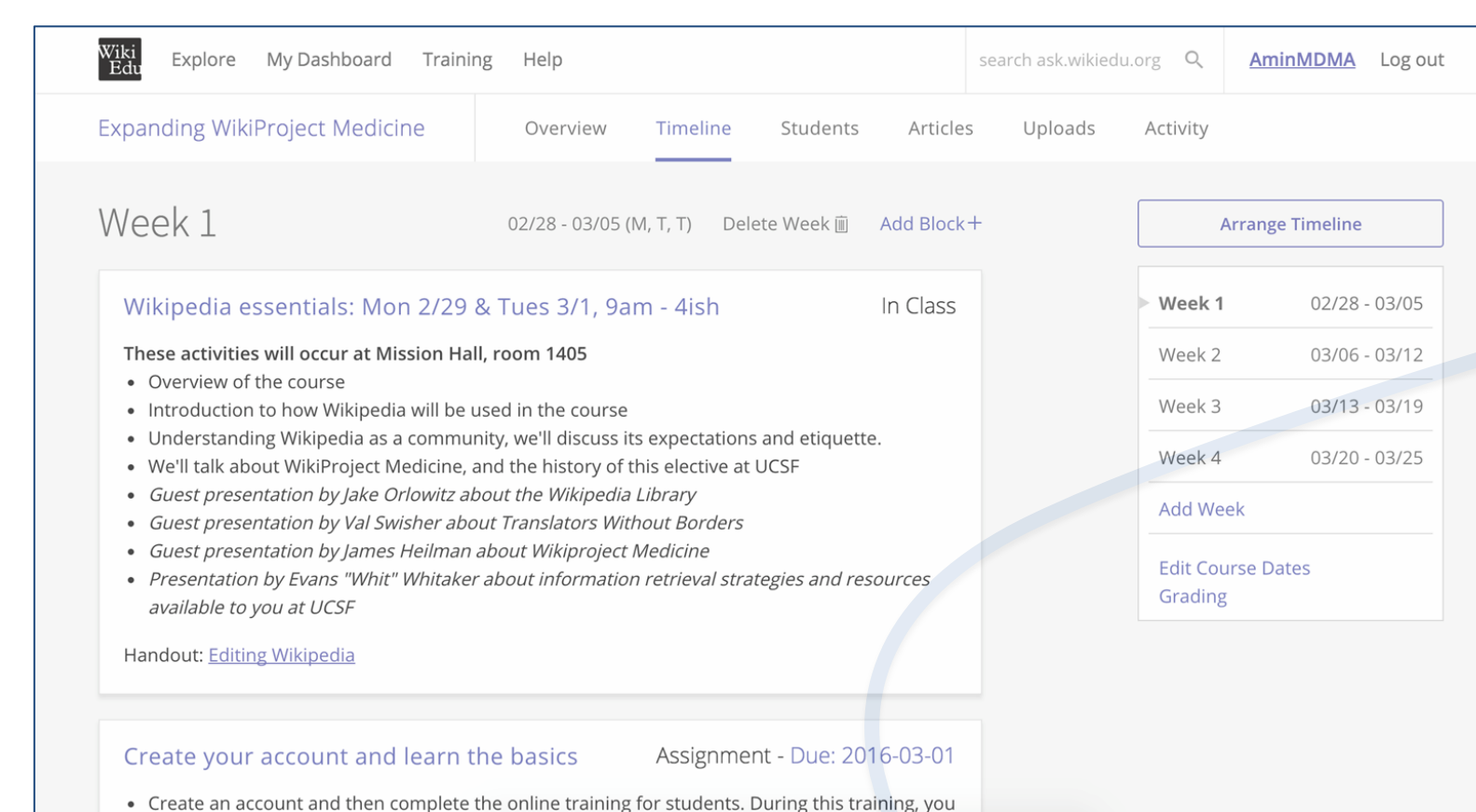
Medical Wikipedia mobile app with versions in 10 languages

Provide access to Wikipedia in developing countries free of data access charges

Result	Article	Importance	Quality	Review Release Score
1	Antimicrobial (t-h-)	Top 2014-03-19 (0)	C 2015-01-31 (0)	1312
2	Antipsychotic (t-h-)	Top 2014-12-23 (0)	C 2015-01-31 (0)	1490
3	Anxiety disorder (t-h-)	Top 2010-01-17 (0)	C 2010-01-17 (0)	1429
4	Cardiovascular disease (t-h-)	Top 2009-10-23 (0)	C 2009-11-13 (0)	1481
5	Cerebral (t-h-)	Top 2009-02-02 (0)	C 2015-12-26 (0)	1594
6	Death (t-h-)	Top 2009-01-15 (0)	C 2010-06-23 (0)	1745
7	Disease (t-h-)	Top 2009-04-09 (0)	C 2010-04-18 (0)	1756
8	Drug (t-h-)	Top 2015-10-09 (0)	C 2015-03-08 (0)	1626
9	Health (t-h-)	Top 2008-06-20 (0)	C 2012-05-23 (0)	1722
10	Health care (t-h-)	Top 2008-02-25 (0)	C 2009-11-19 (0)	1589
11	Health loss (t-h-)	Top 2012-07-25 (0)	C 2014-07-18 (0)	1729
12	Infection (t-h-)	Top 2007-11-29 (0)	C 2008-07-24 (0)	1620
13	Medicine (t-h-)	Top 2009-01-14 (0)	C 2009-05-01 (0)	1839
14	Mental disorder (t-h-)	Top 2010-07-17 (0)	C 2014-01-28 (0)	1677
15	Pharmaceutical drug (t-h-)	Top 2009-02-02 (0)	C 2013-12-30 (0)	1705
16	Physical exercise (t-h-)	Top 2012-10-25 (0)	C 2011-08-25 (0)	1522
17	Vaccination (t-h-)	Top 2009-10-23 (0)	C 2015-04-10 (0)	1516
18	Visual impairment (t-h-)	Top 2015-05-23 (0)	C 2015-05-23 (0)	1366

UCSF School of Pharmacy now also improving medicines related pages

Course Dates	Number of students	Number of pages edited	Days of active editing	Number of edits during course	Average views per page over 30 days	Total views during course
Nov – Dec 2013	5	5	28 days	176	41,072	459,071
April 2014	7	7	28 days	181	47,075	285,233
Nov 2014	16	16	28 days	727	22,127	229,761
Nov 2015	15	15	26 days	444	22,105	635,000
March 2016	7	1	28 days	347	56,491	50,000
	50	44	136 days of student effort	1,875		1,659,065



"I wrote for a lay audience."



Partner with faculty to provide resources for helping and tracking students

"This has been an illuminating experience, to see how much thought and work goes into producing a product that is very easily consumable and almost disposable."

"I've drunk the Kool Aid"

TRANSLATORS WITHOUT BORDERS

Translate articles to 90 other Wikipedia languages

Wikipedia Zero

Together, we are creating the most comprehensive encyclopedia that has ever existed - Wikipedia. Wikipedia belongs to all of us.

Overview

Volunteer Wikipedians around the world work hard to compile the sum of all human knowledge, to make it freely available to every single person on the planet. For many readers in the Global South, the primary (and often only) access to the internet is via mobile. However, mobile data costs are a significant barrier to internet usage. We created Wikipedia Zero so that everyone can access all the free knowledge on Wikipedia, even if they can't afford the mobile data charges.

Transparency and accountability are among our core values, and we invite you to take a look at the Wikipedia Zero operating principles. So far we've launched Wikipedia Zero in 52 countries with 88 operators (and in process of renewing 8 operators). We estimate that more than 300 million people can now access Wikipedia free of data charges. Our goal is to work with every mobile operator on the planet - email us at wiki@wikimedia.org.

We invite mobile operators all over the world to join our mission.

309 million people in 52 countries across 68 operators can now access Wikipedia for free.

Wikipedia:WikiProject Medicine/App

From Wikipedia, the free encyclopedia

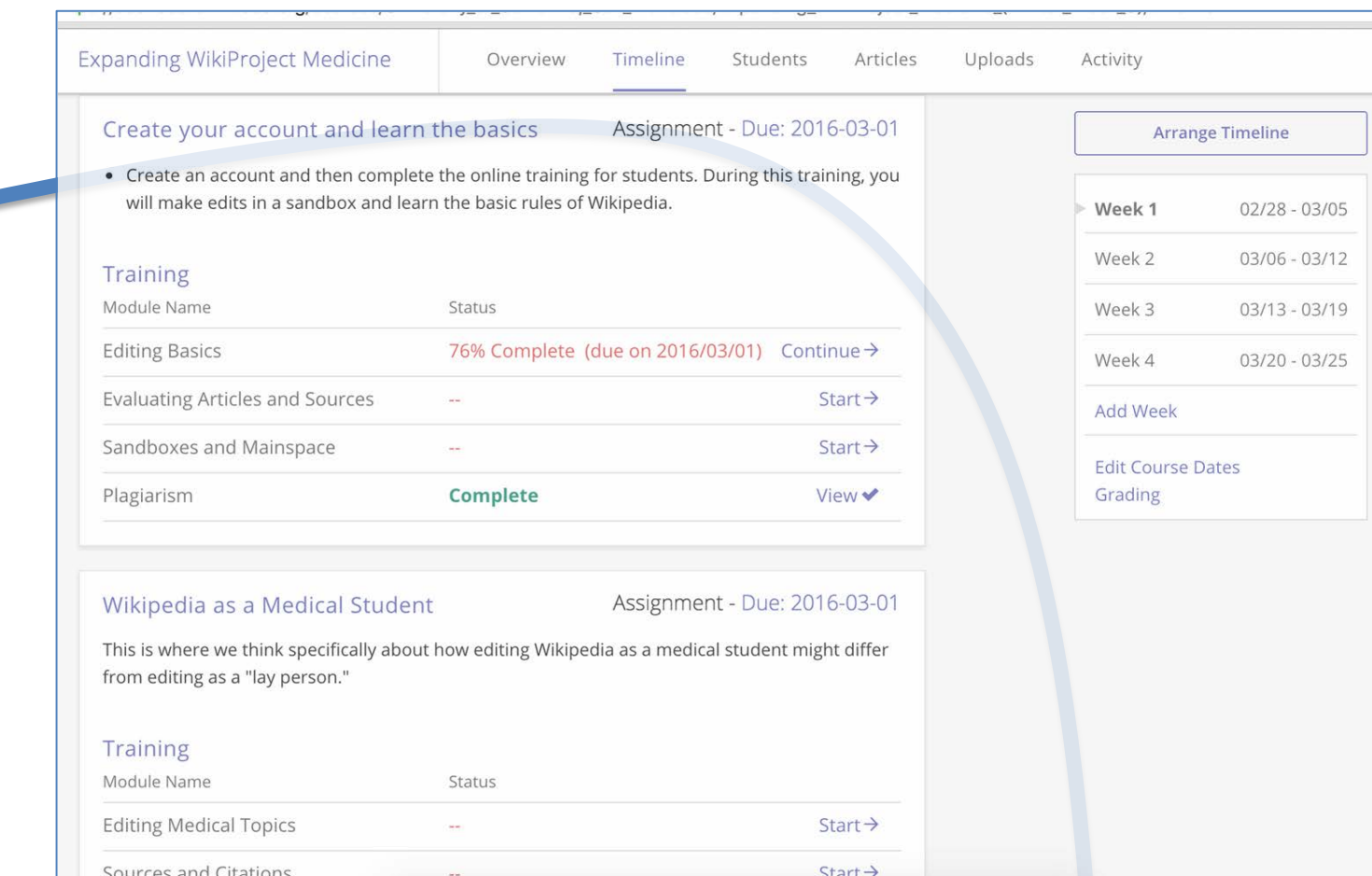
Medical Wikipedia is a mobile app which provides offline access to health information on Wikipedia. It is an instance of the Wikipedia arm of Wikiv.

On June 10th, 2015 Wiki Project Med Foundation and Wikimedia Switzerland launched an android app that contains all of the English Wikipedia's health care content, including medicine, anatomy, medication, and sanitation related articles as tagged by the respective WikiProjects.

Since then, other language versions of the app have followed and can be downloaded at these links:

- Download the app in Arabic (AR) from Google Play
- Download the app in German (DE) from Google Play
- Download the app in English (EN) from Google Play
- Download the app in Spanish (ES) from Google Play
- Download the app in Persian (FA) from Google Play
- Download the app in French (FR) from Google Play
- Download the app in Japanese (JA) from Google Play
- Download the app in Odia (OR) from Google Play
- Download the app in Portuguese (PT) from Google Play
- Download the app in Chinese (ZH) from Google Play

Original author(s) Wikimedia CH, Wiki Project Med Foundation
Initial release June 2015
Stable release 2015-12
Development status Active



Name	Assigned Articles	Reviewing	Recent Edits	Characters Added
Alekjangucf (sandbox)	Infectious disease (medical SD...	Opioid overdose	0	3648 19566
Amakzmd (sandbox)	Vascular dementia	Autism Spectrum	0	7160 852
Bangabulle20 (sandbox)	Pulmonary embolism	Central venous catheter	0	4389 335
Pulmonary embolism			339	38061

Expanding WikiProject Medicine

0 Articles Created | 17 Articles Edited | 444 Total Edits | 15 Student Editors | 24K Words Added | 635K Article Views | 4 Commons Uploads

Details

Admit it! You use Wikipedia extensively. You don't? But do you use it for medical information? Your patients do! So if Wikipedia is the most widely used medical reference in the world, and the third most visited medical reference in the US, why not be a part of increasing the quality of reliable information there by becoming a WikiProject: Medicine editor? This course will teach you how.

Instructors: AminMDMA (Amin Azzam, MD, MA / amin.azzam@ucsf.edu), Efmwhitaker (Evans Whitaker / evans.whitaker@ucsf.edu), Online Volunteers: Ercotter, Lucas559 (Lucas / Ironsnail@gmail.com), Campus Volunteers: M.doe.gcc (Mike De

"Contributing to the digital space is now part of my identity as a future physician"

Language	Arabic	Armenian	Chinese	Indonesian	Japanese	Japanese	Japanese	Japanese
Article	Wiki	Wiki	Wiki	Wiki	Wiki	Wiki	Wiki	Wiki
1 Schizophrenia	Done	Done	Done	Done	Done	Done	Done	Done
2 Dengue fever	Done	Done	Done	Done	Done	Done	Done	Done
3 Urinary tract infection	Done	Done	Done	Done	Done	Done	Done	Done
4 Streptococcal pharyngitis	Done	Done	Done	Done	Done	Done	Done	Done
5 Aspartic acid	Done	Done	Done	Done	Done	Done	Done	Done
6 Common cold	Done	Done	Done	Done	Done	Done	Done	Done
7 Group	Done	Done	Done	Done	Done	Done	Done	Done
8 Spout	Done	Done	Done	Done	Done	Done	Done	Done
9 Spontaneous	Done	Done	Done	Done	Done	Done	Done	Done
10 Hepatitis C	Done	Done	Done	Done	Done	Done	Done	Done
11 Hypertension	Done	Done	Done	Done	Done	Done	Done	Done
12 Obesity	Done	Done	Done	Done	Done	Done	Done	Done
13 Diabetes mellitus type 2	Done	Done	Done	Done	Done	Done	Done	Done
14 Tuberculosis	Done	Done	Done	Done	Done	Done	Done	Done
15 Gastroenteritis	Done	Done	Done	Done	Done	Done	Done	Done
16 HIV/AIDS	Done	Done	Done	Done	Done	Done	Done	Done
17 Malaria	Done	Done	Done	Done	Done	Done	Done	Done

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