

INFORMATION TOOL FOR BETTER HEALTH CARE IN RURAL COMMUNITIES: MAKING FAMILY FOLDER OPERATIONAL

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Summary

In the context of the health sector reform and decentralization in Ethiopia, health information that is standardized, integrated and well linked at all levels plays a central role to monitor the health services and health status of the population.

The organization of the family-based services in Ethiopia, the Health Extension Program, has called for the reorganization of information systems to collect and use information for action at local level using a Family Folder. This in turn drives a need for the careful assessment of what is required for local (community level) data collection, processing, analysis and dissemination, as well as linking to the national Health Management Information System. A collaborative effort made by the Policy, Planning and Finance General Directorate of the Federal Ministry of Health (FMOH), with the support of the World Health Organization (WHO) Country Office, Italian Cooperation, USAID-funded JSI/MEASURE Evaluation HMIS Project, and Tulane University Technical Assistance Project Ethiopia (TUTAPE), was carried out to pilot options for operationalization of the community-based health information system, of which the Family Folder is the center piece. The results of the pilot implementation are expected to inform the nation-wide scale-up of the community-based health information system in Ethiopia. It is foreseen that the findings from this exercise will be used principally by the national, regional and district experts and the Health Extension Program experts all over the country as well as experts at the Monitoring and Evaluation Units of the FMOH and Regional Health Bureaus. The pilot was mainly focused on operational issues of scaling-up the community-based health information system. Nevertheless, such collaborative effort under the lead of the FMOH has to continue to harmonize and standardize the information needs of various health programs implemented at the community level.

1) Introduction

The Health Extension Program (HEP) is one of the major pillars of the health service delivery system in Ethiopia and is the flagship programme of the Health Sector Development Programme (HSDP) (FMOH, 2005a). The rural HEP consists of a package of essential promotive, preventive interventions and selected basic curative services, targeting households (HHs) in a community. HEP is based on the principles of Primary Health Care to improve the health status of families, with their full participation, using local technologies and the skill and wisdom of the communities (FMOH, 2005b; FMOH, 2007). A total of 34,382 rural Health Extension Workers (HEWs) were trained and deployed up to the end of EFY 2002 (FMOH, 2010).

In this context, the Family Folder (FF) was designed as a comprehensive data collection and documenta-

tion tool to be used by the HEWs to meet the necessary information needs to provide family-centered health services at community level (Figure 1). It is the community-based information tool of the reformed Health Management Information System (HMIS) which was designed according to the principles of standardization, integration and simplification to provide the information for decision making (FMOH, 2008).

Each family is provided with a Family Folder which is kept at the Health Post (HP). Information on household identification, family members and household characteristics in terms of latrine, hand washing, waste disposal, drinking water facilities and availability of long lasting insecticide treated nets is recorded on its cover side. HEP packages training and implementation status is recorded on its back side. Health Cards and the Integrated Maternal and Child Care Card are kept inside the Family Folder. The Health Cards are for recording information of individual HH members on follow up of home-based care and support of HIV/AIDS, tuberculo-

sis and other diseases, referrals, family planning and immunization services, and orphan support (if any). The Integrated Maternal and Child Care Card is issued to a pregnant woman for documenting the pre-pregnancy status, pregnancy, delivery and post delivery care of the mother, and immunization and growth monitoring of the child.

The design of the Family Folder was tested in Dire

Thus, it was necessary to test various operational options and to decide on the most feasible approach for the Family Folder implementation.

2) Methodology

The purpose of the pilot implementation was to learn lessons for enhancing the probability of success in op-

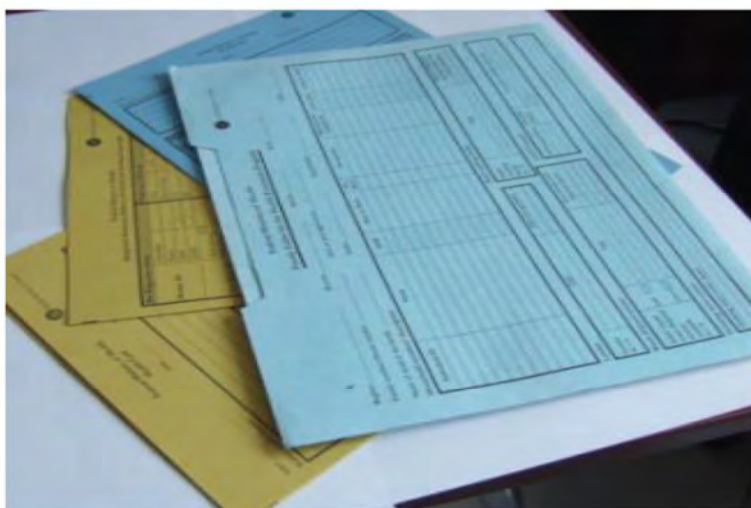


Figure 1. Family Folder for rural Health Extension Program.

Dawa and necessary modifications were made (FMOH, 2010). The Federal Ministry of Health (FMOH) in collaboration with the Regional Health Bureaus (RHBs) and partners is vigorously working to speed up the nationwide implementation of the HMIS, of which the Family Folder is part.

While laying down the foundation for the scale up of the comprehensive HMIS, it became necessary to generate evidence that will inform the nation-wide operationalization of the Family Folder and HMIS procedures at HP, HH and outreach levels. To this effect, the FMOH commissioned stakeholders under its lead to pilot the operationalization of the Family Folder and provide guidance to its country-wide implementation.

This paper aims at describing the findings of the pilot implementation of the Family Folder in 4 kebeles in 2 regions. Of note is the fact that success of a Health Information System not only depends on its technical design, but also on organizational and behavioral factors (Measure Evaluation, 2009; Hotchkiss et al., 2010).

erationalizing Family Folders and HMIS reporting, data quality assurance and information use procedures at HP level and to provide evidence-based operational guidelines for final decision. Therefore the focus was on the operationalization of the Family Folder and HMIS procedures at HP/community level rather than on the format and content of the Family Folder.

To achieve these objectives through a consultative and collaborative effort, the FMOH constituted a Technical Working Group (TWG) comprising of experts from the Planning, Policy and Finance (PPF) General Directorate (GD) of the FMOH, World Health Organization (WHO), Italian Cooperation (IC), MEASURE Evaluation/John Snow Inc. (JSI), and Tulane University Technical Assistance Project Ethiopia (TUTAPE). The TWG developed the study design and selected the sites, with the pilot implementation being carried out from the 7th of July to 6th of August 2010.

Four sites, namely Chewsa and Gembaha Kebeles in Banja Woreda of Awi Zone in Amhara Region and

HEALTH MANAGEMENT INFORMATION SYSTEM

Shurmo and Kidigisa Kebeles in Lemo Woreda of Hadiya Zone in Southern Nations, Nationalities and Peoples Region (SNNPR) were purposely selected for the pilot implementation. Two HEW supervisors and one HMIS focal person from Hadiya Zone (SNNPR), and one HMIS focal person from Banja Woreda (Amhara) were trained for 3 days at PPF office in Addis Ababa. A facilitator's guide was developed for the training and subsequent use by the supervisors.

Trainers were from FMOH, JSI and TUTAPE. In SNNPR, HEWs were trained at their respective HPs by their supervisors and the HMIS focal person. In Amhara, the 2-day training was organized at the Woreda Health Office (WorHO) by the HMIS focal person assisted by mentors.

Table 1 shows the operational options implemented in the pilot sites.

HEWs in their respective HPs carried out the pilot im-

3) Results

The results are summarized as follows: (i) Initial HH registration; (ii) Master Family Index (MFI); (iii) Filing Family Folders; (iv) Carrying Family Folders during household visits and outreach; (v); Recording and updating Family Folders and Health Cards (vi) Using field book; (vii) Reporting from Health Posts; (viii) Data use; and (ix) Other recordkeeping instruments used.

Initial Household registration

In all kebeles, with the assistance of local administrators, volunteers, such as voluntary community health workers (VCHW), students and agriculture workers, were involved in HH registration. It took 9 -11 days for completing the HH numbering and registration. Gote wise HH registration showed a higher number of HH registered per day per volunteer (5 and 7 HHs in Chewsa and Shurmo, respectively) than kebele wise HH registration (4 and 3 HHs in Gembeha and Kidigisa,

Operational options		
	Chewsa and Shurmo	Gembeha and Kidigisa
Household numbering	Gote-wise 5 digit (xx/xxx)	Kebele-wise 4 digit (xxxx)
Volunteer teams for household registration and numbering	Gote-wise teams	Kebele-wise teams
Filing of Family Folders at Health Posts	Gote-wise	Kebele-wise
Master Family Index	Gote-wise alphabetic listing of HH head names	Gote-wise serial listing of HH head names
HMIS recording	Using tally sheet - with HH number recorded on tally sheet - and simple field book for recording data on unexpected encounters during household visits or outreach	At every level (HP, HH, and outreach) using a detailed field book having service specific sections for recording client data and ticks on relevant service
Data quality assessment	a. Comparing FF and tally sheet using Lot Quality Assurance Sampling (LQAS) technique, b. comparing HMIS report with tally sheet	a. Comparing FF and detailed field book using LQAS technique b. comparing HMIS report with field book data.

Table 1. Operational options tested in the four pilot implementation sites in Amhara and SNNP Regions (2010).

plementation. Trained district HEW supervisors were responsible for the monitoring. Members of TWG carried out assessment visits at the commencement and completion of the pilot implementation.

Later, the TWG finalized its findings and recommendations and presented them to the DG of PPF/FMOH and other staff of PPF, who endorsed the recommendations.

respectively). In SNNPR, the cover page of the Family Folder was translated in Amharic and printed copies were provided to the volunteers for data collection. Later, the HEWs transferred the data on the respective Family Folders. According to the HEW supervisor, this translation helped the volunteers to speed up the data collection. There were differences between the number of households registered in each kebele and the household numbers received from woreda administration in all the four pilot sites.

Master Family Index

Preparing alphabetic MFI was time-consuming but preferred by all HEWs because it allowed easy retrieval of Family Folders.

Filing Family Folders

In 3 kebeles, Family Folders were filed serially and gote-wise; in one kebele, the filing was done serially without gote disaggregation. In all cases retrieval of Family Folders was not difficult. Wooden shelves used in Amhara for filing were found to be more convenient and less expensive than steel file cabinets used in SNNPR.

Carrying Family Folders during household visits and outreach

The HEWs in all the kebeles said that they did not carry Family Folders during the outreach. They used field book to record client information and update the Family Folder later. HEWs from two HPs said that they carried the Family Folders during their household visits based on the household they intended to visit.

Recording and updating Family Folders and Health Cards

In 3 Kebeles, health cards were inserted in the Family Folder as and when an individual from the corresponding household received a service. In one kebele, the HEWs inserted the health cards in all the Family Folder beforehand. In all Kebeles, information on Family Folders was updated at the time of family member's visit to health post. During home visit and outreach, information was written on a field book and Family Folders were updated later at Health Post.

Using Field Book

The simple field book was implemented in two kebeles: Chewsa (Amhara) and Shurmo (SNNPR):

- In Amhara, the HEWs did not carry any Family Folder during household visit or outreach. The field book was used for recording service delivery information during HH visit and outreach;
- In SNNPR, HEWs carried FFs during HH visit and used the field book only for unexpected clients met during HH visit;

- Only broad terminologies, e.g. EPI, ANC, were used to record the services.

The detailed field book was implemented in Gembaha (Amhara) and Kidigisa (SNNPR):

- The HEWs used the detailed field book at all service sites – HP, HH and outreach. They filled the detailed field books properly in both kebeles, except the disease section in one site (Amhara);
- Service data were aggregated at the end of the pages by adding up the ticks in the respective columns.

Reporting from Health Posts

In HPs where tally sheets were used for recording HMIS data, the HEWs recorded the HH numbers on the tally sheets. When a sample of data was cross-matched with data of the Family Folder, it yielded 95% data accuracy. In HPs where the detailed field book was used, no tally sheet was required and the report was compiled from the field book. When a sample of data was cross-matched with data of the Family Folder, it also yielded 95% data accuracy.

Data use

All the HEW supervisors and HEWs knew how to calculate indicators using data from the catchment area profile and HMIS Report. In 3 Kebeles, HEWs used their own notebook to identify target clients. Based on this, target HHs were visited. In one kebele, HEWs introduced the innovation of a cardboard box to insert prioritized household numbers for specific service provision.

Other recordkeeping instruments used

In all the 4 HPs, the HEWs were using additional record keeping instruments: for example, notebook, TB record book, prevention of maternal to child transmission (PMTCT) of HIV register, Voluntary Counseling and Testing (VCT) register, trachoma register, outpatient therapeutic programme (OTP) and community communication record book were found to be in use.

Table 2 summarizes the findings from the FF operationalization in the four pilot implementation sites.

HEALTH MANAGEMENT INFORMATION SYSTEM

OPERATION	AWI ZONE (AMHARA REGION)		HADIYA ZONE (SNNPR)	
	CHEWSA	GEMBEHA	KIDIGISA	SHURMO
HEW Training	2 days at WorHO	2 days at WorHO	2 days at Health Post	2 days at Health Post
Registration	– 5 digit gote wise – Took 11 days – 1,024 registered (original count 974) – Volunteers – agricultural workers and VCHW- carried HH registration	– 4 digit kebele wise – Took 9 days – 729 registered (original count 557) – Volunteers – agricultural workers and VCHW- carried HH registration	– 4 digit kebele wise – Took 9 days – 811 registered (original count 693) – Volunteers – kebele administrators, VCHWs and students- carried HH registration	– 5 digit gote wise – Took 10 days – 1,064 registered (original count 922) – Volunteers – kebele administrators, VCHWs and students- carried HH registration
Master Family Index	Gote wise alphabetic	Kebele wise	Gote wise alphabetic	Gote wise alphabetic
Filing Family Folders	– Serially, gote wise – Using wooden shelves	– Serially, kebele wise – Using wooden shelves	– Serially, gote wise – Using steel file cabinets	– Serially, gote wise – Using steel file cabinets
Carrying Family Folders to household and outreach	– No – Use field book, FF updated later	– No – Use field book, FF updated later	– Carry FF on HH visit, not during outreach; – Use field book for unexpected clients and at outreach; – FF updated later	– Carry FF on HH visit, not during outreach; – Use field book for unexpected clients and at outreach; – FF updated later
Updating Family Folders	Health cards inserted in FF as and when individual came to HP	Health cards inserted in all FFs	Health cards inserted in FF as and when individual came to HP	Health cards inserted in FF as and when individual came HP
Reporting	HH number on tally sheet used for reporting	Using detailed field book (column totals not done in the disease section)	Using detailed field book	HH number on tally sheet used for reporting
Data quality (a few sample HH data matched with FF)	95% HH number entries not matching with row total on tally sheet	95%	95%	95%
Other recordkeeping instruments used	– Notebook – TB record – PMTCT, VCT – Trachoma	– Notebook – TB record – PMTCT, VCT – Trachoma	– Notebook – OTP – Community communication record book	– Notebook – OTP – Community communication record book
Comments	– EPI register required for defaulter tracing – MFI should be duplicated for use in field	– Kebele-wise MFI: serial disrupted when adding new HHs	– Translation of FF cover helped during HH registration	– Other reporting formats to woreda in use; HIV/AIDS; – OTP services report of severe malnutrition

Table 2. Main findings from the four pilot implementation sites in Amhara and SNNP Regions (2010).

The different stages of the Family Folder Pilot Implementation are presented in the following pictures (Figure 2).

design, but also on organizational and behavioral factors (Measure Evaluation, 2009; Hotchkiss et al., 2010). Thus, it was necessary to work out various operational

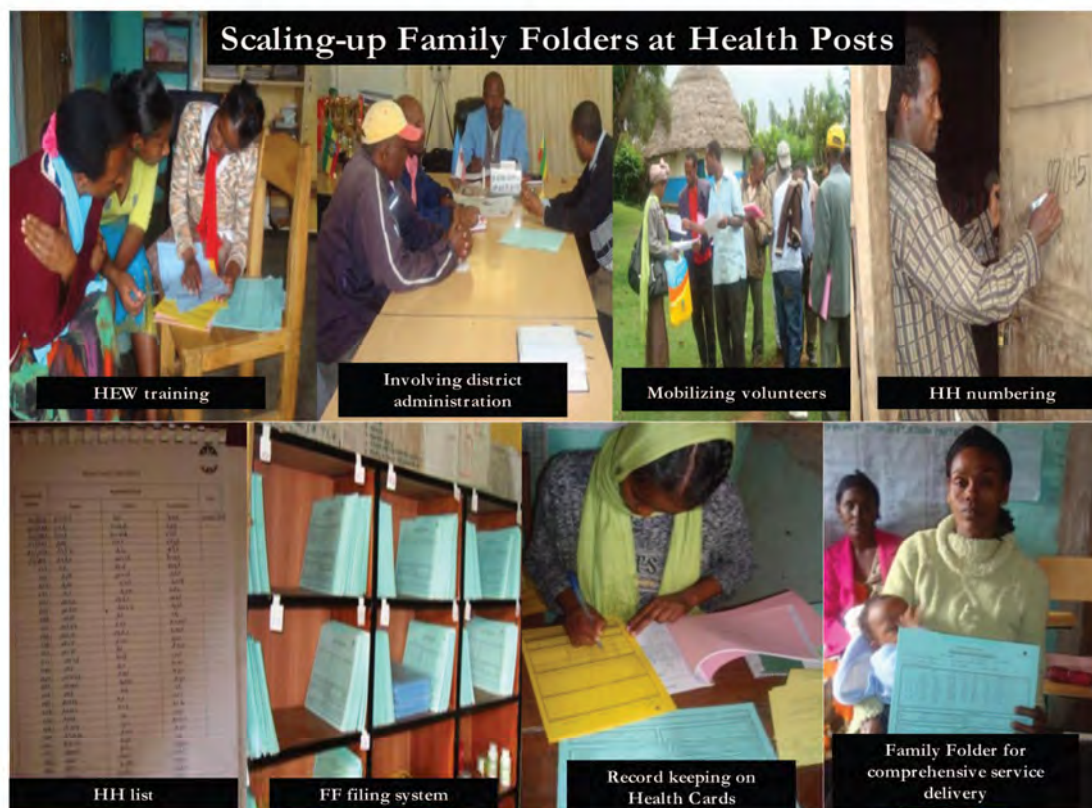


Figure 2. Pictures showing different stages of Family Folder pilot implementation in four sites in Amhara and SNNP Regions (2010).

4) Discussion

The collaborative exercise under the lead of the FMOH to pilot the FF operationalization is an excellent example of how openness to involve various partners and strong leadership role of FMOH can bring beneficial results in very short time. The formation of the TWG helped in pooling technical expertise from various organizations, opening up a broad-based collaboration towards a common objective.

This exercise also underscores the importance of conducting pilot implementation of any newly developed system for understanding the subtle intricacies involved, especially those related to operationalization of the system. Success of HMIS not only depends on its technical

options and try them out to decide on the more feasible approach for Family Folder implementation. In this context, various operational options and their pros and cons were considered during the pilot.

In the initial design of HMIS procedures at Health Posts, the HEWs would only put tally marks of the tally sheets for the services they provide. One of the contentious issues was how to ensure quality of data recorded on the tally sheets. Simple tally marks on the tally sheet cannot be traced back to the service records kept in the Family Folder. One option to address this issue was to maintain a detailed field book where the basic HH information will be recorded in a row and a tick will be put in the relevant service column. At the end of the page, all the ticks can be counted to calculate and report

the number of different services provided. In this way, a single field book can serve both as a tally sheet and field book to record cases for which the HEW did not carry Family Folders during her household visits or outreach.

The other option was to note the household number on the tally sheet in the rows for the corresponding services provided by the HEWs. In this case, the HEW would carry a simple field book to record unexpected cases for whom the HEW is not carrying the Family Folders during her household visits or outreach. Both the options were tried out in two pilot sites. Each option has its own strengths and weaknesses; however, in order to be consistent with the original design so that major design

prepared by using the data from the Family Folder provided the percentage of households with latrines and those with hand washing facility at latrine site (Figure 3A) and the distribution of the population by occupation (Figure 3B) in the 2 pilot implementation sites in SNNPR.

These data can be further analyzed by age and sex, for example, to calculate the percentage of female students in the 5-15 years age group. Household information can benefit other sectors, like education, women's development and agricultural sectors, to target their services to households with specific needs. Information from the Family Folder can help to expand care and support to Orphan and Vulnerable Children (OVC). Thus, house-

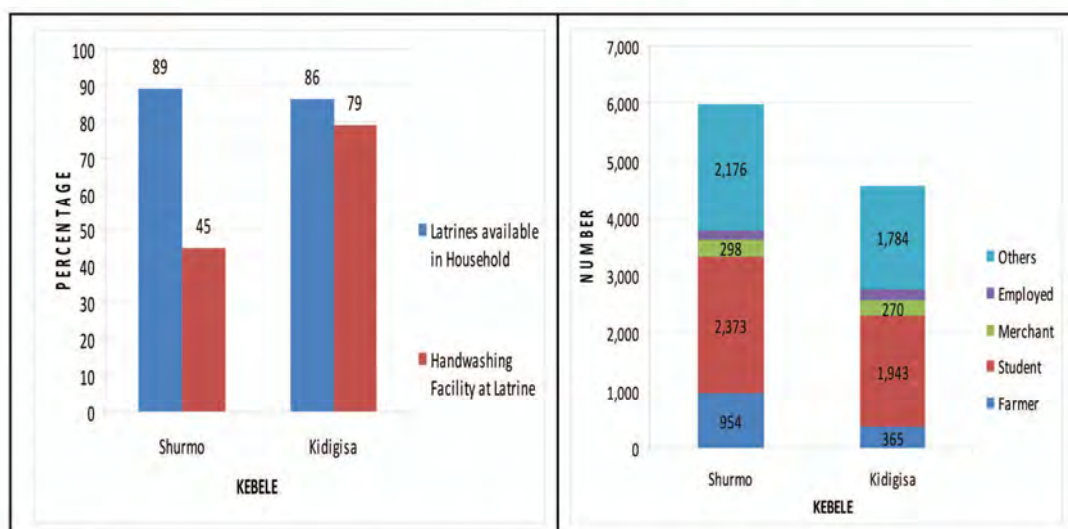


Figure 3. Percentage of households with latrine and with hand washing facility at latrine (3A) and distribution of the population by occupation (3B) in 2 pilot implementation sites in SNNPR (2010).

change is not necessary as well as to apply the simpler and cheaper option, the latter one was preferred by the majority of the TWG members.

Another major finding was that using community volunteers and involving local administrators is cost-effective, ensuring ownership and sustainability in the scale-up of the community-based information system.

The pilot implementation not only helped in deciding on operational guidelines, but also in informing how the data from the Family Folders can be useful in a multi-sectoral environment. For example, the kebele profile

hold information captured on Family Folder can be very helpful in designing an holistic multisectoral approach for improving the social sector services at community level.

The focus of the pilot was on the operational aspect of implementing the Family Folders and the HMIS procedures at community level rather than on their technical design or content. However, the HEWs and their supervisors involved in the pilot raised a few pertinent concerns about the contents of the Health Cards. For instance, the nutrition status should be recorded using z-score. However, in the reporting format nutrition status

is classified using percentage levels. Clarity on whether to record the immunization status of under-one year old child on the Integrated Card or the Health Card was sought by the HEWs. Similarly, experts from other programs expressed their concerns on how various program data will be captured in the Family Folders. On the other hand, a number of other information tools were found to be used at the HPs. These issues should be addressed through consultation. It was, therefore, agreed by the PPF DG that the TWG will continue to closely monitor the Family Folder implementation in the pilot sites and have consultations with other stakeholders based on the field experience to find out appropriate solutions to the concerns raised.

5) Conclusions

Within the limits of allocated time and scope of the pilot, the following operational guidelines are recommended for implementing the Family Folder and HMIS procedures at community level:

- Duration of training will be 3 days for HEWs supervisors and 2 days for HEWs;
- Kebele profiling will be done using gote-wise registration;
- Involvement of respective woreda and kebele administration and mobilization of volunteers are essential for the initial HH registration within a short period;
- Master Family Index should be gote-wise with alphabetic listing of HH Heads;
- Locally-made wooden shelves will be used for filing the Family Folders and the filing of the Family Folders will be done gote-wise;
- For HMIS data recording, HH numbers will be recorded on the tally sheet against respective services to ensure data verification;
- A simple field book will be maintained by the HEWs for recording data on unexpected encounters during HH visits and outreach; and
- HEWs will use information from the Family Folders for targeting HHs with specific service needs, e.g. maternal care, OVC, HIV/AIDS and TB cases.

The results of the pilot implementation are expected to inform the nation-wide scale-up of the community-based health information system in Ethiopia, resulting in a major achievement towards the use of information for evidence-based decision making.

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