

Management of the National Health Insurance Scheme by HMOs: Determining the Workability of the Mechanisms Involved

YAKI KATUKA

Ibrahim Badamasi Babangida University, Lapai, Niger State, Nigeria

EMELDA IFEANYI EMMANUEL

Ibrahim Badamasi Babangida University, Lapai, Niger State, Nigeria

JOSEPH MAREN SAMPSON

ECWA Theological Seminary Kagoro, Kaduna State

Abstract. The health maintenance organizations - national health insurance scheme design in health care is an arrangement or mechanism employed to ensure a successful implementation of the NHIS itself. However, the processes involved in managing the enrollees through this arrangement may be complex and tasking. But because both organizations share similar goals, partnering may be possible. The study therefore focused on the role of HMOs and how they can facilitate the National Health Insurance Scheme. The essence was to find out if they can work together. The study utilized the quantitative and qualitative methods to gather information from respondents. The survey method was used to obtain responses from 384 respondents in the study and nine in-depth interviews were conducted with key officials of important organizations in the scheme. From the analysis and discussion of the research findings, it was discovered that HMOs played very important roles in the scheme and had significant impact on the scheme. It also discovered that HMOs do not only manage funds meant for the treatment of NHIS enrollees, but reduce the administrative burden of intermediaries for NHIS, HCPs and uses of the scheme. They enable the smooth functioning of the scheme as they effectively discharge their duties. The implication of these findings of the study is that HMOs on a long run, if properly supervised by the NHIS would facilitate the achievement of the goal of universal coverage far beyond stipulated time.

Keywords: Health Maintenance Organization, Managed care, Health care, National health insurance scheme.

1. Introduction

The designing of a national health insurance scheme to include the services of health maintenance organizations is one measure employed to ensure a successful implementation of a National Health Service. However, the process involved in the management of enrollees through this arrangement may be complex (Emmanuel, 2017). HMOs most often work independently of a National Health Insurance. HMOs are corporations that are licensed under the insurance laws of the state to operate and assume financial responsibility of providing a defined set of medical services to their enrollees for a fixed premium (Michael, 2005). They combine the provision of health insurance and the delivery of health care services to enrollees, under a network of doctors and hospitals, for a monthly or annual fee (Thomas, n.d; Hayes, 2020). This health care services from a network of medical doctors and hospital services to enrollees are pre-paid and wide-ranged (Campbell, 2007; Hayes, 2020). Health Maintenance Organizations manage, rather than provide health care for clients. They manage health care because they organize and coordinate the activities of doctors, hospitals and other care providers into groups to enhance the quality of health care services. It is a system organized to finance particular type of health

services to a defined, voluntarily enrolled population through a network of providers who are accountable for cost containment and quality health results. Cost containment in health care is achieved by being able to reduce prices and control access to services at the same time (Campbell, 2007). Health maintenance organizations have become popular substitutes to traditional health care plans offered by insurance companies because they cover a wide range of services at a significantly lower cost. However, they have lots of restrictions for their members (Campbell, 2007; Hayes, 2020). The prices are lower because Health Maintenance Organizations bid against one another. The money left over at the end of the year is the Health Maintenance Organizations' profit (Henslin, 2010). Until the early 1980s, before HMOs started becoming popular, traditional health insurance was the dominant form of health coverage. But as cost of health care started to increase tremendously under the traditional health insurance model, managed care firms became more reliable for many employers. And by 1990s and beyond, 90 percent of health insurance were mostly sold to managed care plans (Michael, 2005).

Health Maintenance Organization is a form of managed care because it provides health care services through a network of selected doctors, hospitals, clinics, and other health care providers to enrollees. HMOs try to deliver all-inclusive, contractual and timely services to their members. This implies that members received care from the primary care physician of their choice within the network of providers under the HMO (Campbell, 2007; Infinity, 2020). The contact point for all the health care needs of the enrollees is the primary care physician who runs all medical care, and provides referrals to the specialist or the other health providers in this structure. HMOs share the goal of reducing health care cost by focusing on preventive care and implementing management control measures for utilization (Campbell, 2007). While this arrangement eliminates unnecessary medical treatment, it can also reduce necessary treatment (Henslin, 2010). Health Maintenance Organizations and other closely related organizations share the characteristic of providing medical care for a prepaid periodic fee. And care could come directly from the Health Maintenance Organizations or from primary health care providers in contracts with the HMOs (Dictionary of American History, 2003).

Health Maintenance Organizations do not provide full coverage for enrollees and vary in their costs and benefits. Fixed fees make these organizations profitable to the extent that their enrollees stay

healthy by taking preventive measures rather than curative to health (Macionis, 2005). They successfully control costs by doing the following: (1) excluding health care services deemed unnecessary, (2) prescribing drugs only on the prescription list, and (3) reducing clients' total freedom of choice in health care (Campbell, 2007). In Nigeria, the NHIS coopted the services of HMOs to run the scheme (NHIS Operational Guidelines, 2012). While some have expressed their fears of the danger of this type of arrangement, stating that unless health care givers are allowed to manage the scheme directly, the scheme will fail, others believe that this model of NHIS has its advantages. These opinions have been expressed by Nigerians (Aderole, 2010). The activities of HMOs in Nigeria's NHIS can be summarized as these:

- Effect timely payments to healthcare facilities.
- Ensure effective processing of claims (Secondary Services).
- Carry out continuous quality assurance of healthcare services.
- Ensure timely approval of referrals and undertake necessary follow up to complete referrals.
- Carry out continuous sensitization of enrollees.
- Market approved health plans to employers/enrollees
- Collect appropriate contributions and make necessary payments to the appropriate pools in a timely manner
- Effect necessary returns to NHIS in line with the operational guidelines
- Comply with other provisions as spelt out in the operational guidelines (NHIS Operational Guidelines, 2012).

HMOs effective performance of these tasks outlined above would greatly contribute to the success of the entire scheme. If otherwise, are unable to fulfill their responsibilities, may lead to unachieved goals in the NHIS (Emmanuel, 2017). But, since NHIS and HMOs share similar goals, there are chances that they could work together to achieve set goals on appropriate terms and conditions. However, the structural arrangements would be a complex one (Emmanuel, 2017). Health Maintenance Organizations functions in Nigeria's National Health Insurance Scheme varies according to the programs designed by the scheme (NHIS Operational Guidelines, 2012). Although some Health Maintenance Organizations in Nigeria have been accused of: (1) not paying PHCPs for medical procedures they consider unnecessary, and (2) have

refused to remit funds meant for health care to hospitals that had already seen their clients (Aderere, 2010), arguments in support of this NHIS – HMO arrangement are that; (1) HMOs ability to collaborate with PHCPs would lead to a successful implementation of the scheme (Ogundimu, 2011), (2) private sector participation in health service delivery would prevent laxity towards public services, (3) it would enhance private sector participation in health care services (Anyene, 2012), and (4) HMOs would encourage the cooperation of various health care professionals under the scheme to ensure efficiency of services to the insured (Edozien, 2007). No doubt, collaboration between both parties would require lots of efforts and even more to make the scheme successful, however, it is required.

2. Research Methodology

The quantitative part of the study followed a cross sectional survey design while the qualitative part employed in-depth interviews approach. Nine key persons in the National Health Insurance Scheme (NHIS) and in Health Maintenance Organizations (HMOs) were interviewed. On the other hand, the survey questionnaires were administered to NHIS beneficiaries registered with some selected and accredited HMOs in the FCT to assess the knowledge of beneficiaries about HMOs and the NHIS, the relationship between the NHIS and the HMOs, the impact of the HMOs on the NHIS, as well as the roles the HMOs are playing in the implementation of the NHIS scheme. The study population comprised:

- All the lives covered by NHIS in the FCT under the public sector;
- All the HMOs covering lives on the behalf of NHIS in the FCT as at 2011.

The NHIS lives in the FCT were 244, 992 while the HMOs covering these lives on behalf of the NHIS in FCT were 25. The study's target groups were the NHIS lives (enrollees/ beneficiaries) in the public sector in FCT and the registered/ accredited HMOs covering/managing these lives. The NHIS lives that formed the population of study were distributed across the various ministries, agencies and parastatals in the FCT and managed by the 25 HMOs in FCT, Abuja.

2.1 Sampling Technique

In this study, the respondents for the cross-sectional survey interview were selected by systematic random sampling, so that each respondent had equal chances of being selected into the sample for the survey. The HMOs in the survey were selected by simple random

sampling proportionate to size; this was done to allow each HMO in the FCT to have equal opportunity/chance of being chosen into the sample. Since simple random sampling and systematic sampling are probability sampling methods, it is hoped that the findings derived from this study can be generalized into the population i.e. for the whole 25 HMOs covering NHIS lives in the FCT and the entire 244,992 public sector lives covered by the HMOs for the NHIS in the FCT. Essentially, the design was a two-stage sampling design.

In the first stage, the HMOs were selected by simple random sampling with replacement. Out of the 25 HMOs covering lives on behalf of the NHIS, 5 were selected for the study. A list showing the names and number of HMOs managing NHIS enrollee was obtained from the NHIS headquarters in FCT, Abuja. The list had a total of 25 HMOs managing NHIS enrollees. Each of the 25 HMOs were written on separate pieces of papers, each of the pieces was closed up and wrapped, put in a box, mixed together and shaken. After this was done, a piece was drawn out from the box at a time, but replaced back to the box prior to another (the next) selection. Note: The box was shaken after every replacement and before each selection. This procedure was done five times to select the five HMOs for the study. These selected HMOs represent 20% i.e. one-fifth of the 25 HMOs covering NHIS lives in the FCT. The rationale for sampling with replacement is to ensure that independent events are produced. Sampling with replacement allows repeated member/items to be sampled more than once. In the second stage, the respondents were selected by systematic random sampling.

2.2 Method of Data Collection

The survey instrument was divided into sections with a section designed using summated differential scale (Likert scale). It was further subjected to face validity, i.e. the instrument was given to the thesis supervisor and other authorities for scrutiny to check if the instruments were actually measuring what they intend or are supposed to measure and to ascertain that the universe of all questions or items included in it were duly included. Also, the reliability of the survey instrument was calculated using the Crombach Alpha statistics to ascertain whether there is internal consistency in the items/questions in the study instrument and to verify to what extent the instrument produced the same results or replicate consistent results if similar studies are carried out afterward using the same instrument. Also, an item

analysis was done to examine the items/questions in the questionnaire to ascertain the desirability of dropping, retaining or replacing any of them depending on the resulting Cronbach Alpha coefficient of the said item/question if it was deleted. In addition to the above, difficult or inappropriate questions discovered from the response of the respondents/interviewees was deleted, replaced or rephrased. Coefficient alpha, an internal consistency measure was computed for the survey instrument. The estimate for the survey instrument was .92. The number of items/questions in the instrument was 74. The coefficient indicates good reliability of the survey instrument. The estimate shows that there was good internal consistency in the items/questions used in both survey instrument. Values of .70 and above are acceptable values for Cronbach's alpha (α), but values below this indicate unreliable scale.

3. Results

The survey demographics show that males were more 203 (52.9%) than the females 177 (46.1%). Responses from ages 26-45 were highest in the

survey, this indicated that majority of the respondents were adults. The married respondents were 319 (83.1%) while the singles were 50 (13.0%) other i.e. those separated were 4 (1.0%), Divorced 1 (0.3%) and widowed 7 (1.8%) for educational qualification, 210 (54.7%) of the respondents had first degree, those with a diploma qualification were 81 (21.1%) while masters and PhDs were 52 (13.5%) and 2 (0.5%) respectively. The study discovered that majority of the respondents were highly educated and their responses could be relied upon in response to certain questions asked.

Responses were presented in tables in line with the study objectives. To satisfy these objectives, respondents were asked questions in respect to the Scheme and HMOs involvement. The responses obtained for each objective of the study are presented in the tables below:

Objective: To determine the workability of the mechanism involved in the management of National Health Insurance enrollees by Health Maintenance Organizations.

Table 1: Responses on Where They Registered for NHIS

Where did you register to obtain your National Health Insurance Scheme's Identification?	Total Health Trust Ltd	HealthCare International Ltd	Maayoit HealthCare Ltd	Princeton Health Ltd	Managed HealthCare Services Ltd	Total
HMO office	4 3.1%	1 .6%	1 6.7%	1 7.1%	3 6.0%	10 2.6%
NHIS office	25 19.7%	40 22.5%	2 13.3%	1 7.1%	1 2.0%	69 18.0%
At your place of work	87 68.5%	119 66.9%	11 73.3%	12 85.7%	43 86.0%	272 70.8%
No response	11 8.7%	18 10.1%	1 6.7%	0 .0%	3 6.0%	33 8.6%
Total	127 100.0%	178 100.0%	15 100.0%	14 100.0%	50 100.0%	384 100.0%

Table 1 indicates the places where respondents registered for the NHIS according the HMOs. The responses obtained from respondents under Total Health Trust Ltd indicated that 4 (3.1%) of the respondents registered with the scheme at the HMO office, 25 (19.7%) of the respondents registered with the scheme at the NHIS office, while 87 (68.5%) registered with the scheme at their various work places. 11 (8.7%) of the respondents did not provide any response to this question. For Healthcare International Ltd, 1 (0.6%) respondent registered at the HMO office, 40 (22.5%) registered at their various places of work and 18 (10.1%) did not respond to the question. For Maayoit Healthcare Ltd, 1 (6.7%) registered at the HMO office, 2 (13.3%)

registered at the NHIS office while 11 (73.3%) registered with the scheme at their places of work. 1 (6.7%) did not respond to this question. Responses for Princeton Health Ltd, shows that 1 (7.1%) registered at the HMO office, another 1 (7.1%) registered at the NHIS office while 12 (85.7%) registered with the scheme at their places of work. All respondents under this HMO were registered with the scheme. For Managed Healthcare Services Ltd, 3 (6.0%) registered at the HMO office, 1 (2.0%) registered at the NHIS office and 43 (86.0%) registered at their places of work. 3 (6.0%) did not respond to the question asked.

Going by their percentages, those who registered with the scheme at the HMO offices were highest among Princeton Health Ltd with 7.1%, followed by Maayoit Healthcare Ltd with 6.7%, then those under Managed Healthcare Services Ltd with 6.0%, Total Health Trust Ltd 3.1% and Healthcare International Ltd 0.6%. Furthermore, those who registered with the scheme at the NHIS office were highest among those under Healthcare International Ltd 22.5%, followed by Total Health Trust Ltd with 19.7%, Maayoit Healthcare Ltd 13.3%, Princeton Health Ltd 7.1% and Managed Healthcare Services Ltd 2.0%. For those who registered with the scheme at their various offices, Managed Healthcare Services Ltd had the highest figure of 86.0%, followed by Princeton Health Ltd with 85.7%, then Maayoit Healthcare Ltd with 73.37%, Total Health Trust Ltd with 68.5% and Health Care International Ltd with 66.9%.

From the summary of the figures in the table above, only 10 (2.6%) of the respondents indicated that they registered with the scheme at the HMOs office. 69 (18.0%) said they registered at the NHIS office, while 272 (70.8%) others said they registered at their work places. This last group of people formed the majority. They were most likely among the number of those who started with the scheme from the onset. Those who did not respond were 33 (8.6%). The results indicate that majority of the respondents registered directly with the scheme at their various places of work. This explains why many of the respondents did not know their HMOs even though HMOs had been in existence from the onset of the scheme.

In-depth Interview Responses on HMOs Participation in NHIS

First and foremost, in the discussions, respondents were asked to discuss the activities of the NHIS and the scope of the scheme before outlining the activities of HMOs in the scheme. On the activities of the scheme, respondents outlined the following as functions of the NHIS;

On the scope of the activities of NHIS, **Mr. A** indicated that the scope of the NHIS activities is:

Ensuring the universality of the hundred percent coverage of Nigerian population and the attainment of the organizational goal.

Mr. B also indicated that the scope of the scheme is: *Nationwide: Universal coverage which is the target of the scheme. This means that all Nigerians should be covered.*

Mr. C said the scope of the scheme is the: *The entire country*

These responses implied that the NHIS is a social health insurance scheme for the entire country. The responses also tallied with those written in the NHIS Operational Guidelines. Having talked about the scope of the NHIS, respondents then gave their candid expressions on HMOs participation in NHIS which is indicated in table 1 below:

Table 2: In-depth Interview Responses on HMOs Participation in NHIS

Categories	NHIS	HMOs	HCPs
HMOs collect premium/contributions	- ++	+++	---
They pay capitation/fee for-service to HCPs	+ +-	+++	+++
They conduct quality assurance on healthcare facilities	+++	+ - +	---
They effectively manage NHIS funds the for treatment	+++	+ + -	+ - -
They reduce the administrative burden of the scheme	- + -	- - +	+ + -
They work as intermediaries between NHIS, HCPs and users	- - -	+ + -	+ + +
They coordinate and facilitate the scheme	- - -	- - -	- + -
They ensure access to healthcare	- - -	+ - -	---
They play advisory role to NHIS	- - -	+ - -	---
They check malpractice and eliminate fraud among HCPs	- - -	+ + -	+ - -
They register NHIS clients and complement the role of NHIS	- - -	+ + -	+ - -

Key:

+ Where positive responses were expressed on HMOs participation in the scheme.

- Where contrary views were expressed on HMOs participation in the scheme.

Table 2 above presents the summaries of positive views from the IDI results on HMOs participation in the NHIS. However, below are the presentations of responses in detail:

The In-depth Interview Analysis on HMOs Participation in the NHIS

First, **Mr. A**, 55 years, married with nine children, a Muslim and had worked in his organization for 12 years, indicated that:

Health Maintenance Organizations are fund managers in the scheme". They handle payment/settlement of claims to healthcare facilities and conduct quality assurance.

Similarly, **Mr. B** who was 40 years old married with 3 children, a Christian and had worked with the organization for 11 years also reported that;

HMOs Collect Premium/Contribution, they make payments to healthcare facilities for health services rendered to NHIS enrollees, ensure quality assurance on HCFs, ensure efficiency, accountability of services rendered by HCF, they are responsible for certain administrative task which shifts the burden of management away from the government.

Another respondent, **Mr. C**, 45 years old and married with one child said:

They effect payment of capitation and fee for services to health providers,

They ensure timely approval of referrals

Carry out continuous quality assurance of healthcare services,

Mr. D married with 2 children, a Christian and a medical doctor with one of the HMOs under study reported that:

We (HMOs) pay Health Care Providers for health services rendered/offered to NHIS enrollees allocated to our organization. Through this, we ensure access to care. We are like the middle men between NHIS and clients, apart from managing funds provided by NHIS, we inspect accredited hospitals to ensure quality of healthcare is maintained and that hospitals are equipped. We pay unscheduled visits to hospitals.

When the same respondent was asked how HMOs managed NHIS enrollees, he further said that:

We (HMOs) basically register clients with hospital, hold interactive forum with them (clients and provides), educate them on what their benefits are....., pay unscheduled visits to hospitals, we look at patients' folders, hospital treatment sheets to ensure adequate and proper treatment is instituted. We do this by using medical doctors who are employed by our own organization.

Similarly, **Mr. E** another key official with HMO responded by saying that:

We (HMOs) handle NHIS funds to pay healthcare providers for health services rendered to our NHIS enrollees i.e. we pay for health services rendered by Health Care Provides to NHIS funds to pay Health Care Provides for health services rendered to our

NHIS enrollees i.e. we pay for health services rendered by healthcare providers to NHIS registered member..... We complement the role of NHIS in achieving their aims and objectives.

Mrs. F, 42 years old, a Christian and married with five children said

We do effective timely payment of capitation to healthcare facilities, we ensure effective processing and payment for- services,

We carry out continuous quality assurance of healthcare services

We ensure timely approval of referrals and undertake necessary follow up to complete referrals.

Like yesterday, we went out to visit some health facilities to see our patients. Sometimes a health provider may tell us that a patient is on admission but it is a lie. For example, if they say a woman is on admission for CS and it is not true, we will find out when we visit.

Still on HMOs participation in the scheme, **Mr. G** a Senior Administrative Officer in one of the health facilities reported that:

They serve as middle man i.e. they mediate between NHIs and HCP. They also help to eliminate fraud. They help to curtail excesses so that the scheme will not be abused by the users and the HCPs..... HMOs role is pivotal but little because they only do payment for health services. However, they are the life wire of the scheme.

Mr. H, who owns a health facility accounts on HMOs participation in the scheme:

HMOs are more businesslike. They ensure that there is efficiency of services i.e. improved facilities and corresponding improved quality of service. HMOs are intermediaries between NHIS, Health Care Providers and the users. There is no way NHIS can do it alone and be efficient HMOs are necessary for the smooth running of the scheme.....

The summary of analysis of the responses in the table above is presented as these: NHIS respondents indicated that HMOs basically manage NHIS funds meant for the treatment of enrollees, reduce the administrative burden of the scheme, facilitate the scheme. Furthermore, the HMO respondents indicated that HMOs were effective fund managers of the scheme, they are intermediaries between the scheme, Health Care Providers and user of the scheme, enable quick access to healthcare, bring administrative efficiency to the scheme, check corruption and malpractices and play advisory role to NHIS.

Table 3: In-depth Interview Responses of Divergent views on HMOs Participation in NHIS

Categories	NHIS	HMOs	HCPs
HMOs are an increased cost burden to the scheme	+ +-	- - -	- - -
They are for- profit organizations	+++	- - -	+++
They delay in providing authorization codes	+ - -	- + -	+++
Poor monitoring of HCFs	+ -	- - -	- -

Key:

- + Where positive responses were expressed on HMOs participation in the scheme.
- Where contrary views were expressed on HMOs participation in the scheme.

Table 3 above presents the summaries of some divergent views from the IDI respondents on HMOs participation in the NHIS. However, the details of the IDI sessions are presented below:

The In-depth Interview Analysis of Divergent Views on HMOs Participation in NHIS

In contrast to these responses on the function of HMOs in the scheme, there were a few divergent views from some respondents. **Mr. A**, 55 years old, Muslim working with one of the organizations said: *HMOs delay claim payments to HCFs.*

Mr. B, 40 years old, a Christian working with the same organization with the first respondent reported that:

The involvement of HMOs has increased the cost of the scheme.

Mr. C, 45 years old and married with one child said:

Their task can be done by the NHIS itself.

The summary of responses from all groups indicated were that HMOs delay in providing authorization codes meant for the commencement of treatment for secondary care, are for- profit organizations and delay in making payments to HCPs. In addition, the NHIS respondent said HMOs were an increased cost burden to the scheme. The unanimous responses on HMOs delay in the payment of ‘capitation’ or most commonly on ‘fee- for service’ to Health Care Providers is noteworthy. The trend of delays in both types of payments for health services and the provision of authorization code can be an ill signal to the scheme.

4. Conclusion

The study focused on the role of HMOs and how they can facilitate the National Health Insurance Scheme. The essence was to find out if they can work together. It is believed that the scheme would be more effective and function better if HMOs are involved. The methods used to gather data from respondents for the study was the quantitative and qualitative methods. The quantitative method entailed the use of a survey instrument to obtain responses

from 384 respondents derived from the study population of 244,992 public sector lives covered by the HMOs for the NHIS in the FCT, using the systematic sampling design. While for the qualitative method, nine in-depth interviews were conducted with key officials of important organizations in the scheme. From the analysis, discussion and findings of this research, it was discovered that HMOs played very important roles in the scheme and had significant impact on the scheme. It also discovered that HMOs do not only manage funds met for the treatment of NHIS enrollees, but reduce the administrative burden of intermediaries for NHIS, HCPs and uses of the scheme, and enable the smooth functioning of the scheme as they effectively discharge their duties. The implication these findings have for the study is that HMOs on a long run, if properly supervised by the NHIS would facilitate the goal of universal coverage beyond stipulated time. The study further discovered that majority of those using the scheme believe it is working and that HMOs were functioning well in the scheme. Also, some respondents believed that the cost of running this type of Social Health Insurance was quite expensive but necessary. Others indicated that some other factors other than what is known, accounted for NHIS reduced or seemingly slow performance in achieving the goal of health for all. Although HMOs activities can be done by the NHIS itself, the efficiency of the scheme may be threatened due to the nonchalant attitude of public sector workers in public service delivery.

5. Recommendations

These recommendations were made in response to the challenges that were highlighted in the study:

- NHIS should intensify efforts in monitoring the activities of the HMOS involved in the scheme for better functioning of the scheme.
- The issues on delays in the payment of capitation and fee for services should be addressed in to prevent setbacks on the entire scheme.

- Prompt and decisive action should be taken by the NHIS against offending HMOs and HCPs to forestall discipline and enhance greater efficiency of the scheme
- The scheme should be given the rights of an agency to enable it perform better.
- Since HMOs have indicated that the biggest challenge was for enrollee not to know their benefits, both the NHIS and HMOs should engage in the creation more awareness programs to reach the public.
- The processing of registration forms should be done more quickly than it is done now i.e. duration for registering enrollees should be made shorter and faster.

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