SOSAS

SURGEONS OVERSEAS
ASSESSMENT OF SURGICAL NEED

A LOGISTICAL GUIDELINE FOR SOSAS

Introduction to the guideline

This manual is a guideline for the Surgeons OverSeas Assessment of Surgical Need (SOSAS). It includes information on personnel recruitment, budgeting and ethical approval. Furthermore the methodology and sampling methods are explained.

The document will provide guidelines and advice but local adaption might be needed in the recruiting process due to local laws and regulations and in the SOSAS questionnaire itself due to cultural beliefs and customs.

Next to this manual there is also an Interviewers manual for SOSAS and a training manual for SOSAS. The interviewers' manual is written for the recruited interviewers and the training manual is useful for organizing a thorough training for the interviewers to become acquainted with SOSAS as well as iPad use.

Comments and remarks are welcome to make this manual a living document which helps to discover, follow up and work on the surgical burden of the people in Low and Middle Income Countries.

We, SOS hope to have a good collaboration with all of you who are working on improving the surgical services all around the world.

Kind regards,

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SOS International Surgical Fellow

SOS Assessment of Surgical Need (SOSAS)

LOGISTICAL GUIDELINES FOR SOSAS

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LOGISTICAL GUIDELINES FOR SOSAS

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INTRODUCTION

Although surgical care is an essential component of health care, it is often not seen as a priority by the global health community. The reasons for this neglected status are due to the unfamiliarity of surgical care within public health, concerns about cost-effectiveness and the absence of surgeon involvement in health care planning. [Farmer 2008] Recently there is more public health involvement in the discussions on access to surgical care and the focus of surgeons is going beyond the OR. [Bae 2011]

Surgical care is considered a surgical procedure (wound care, suturing, incision, excision or otherwise manipulating of tissue), in a safe and painless way. Rather than focusing on one disease, surgical care is procedure oriented and has a large number of diagnoses which need different surgical procedures. Surgical care is not limited to an age group or sex and has different outcomes. [Bickler 2009] Patients who are in need of surgical care can be cured, have a reduction in disability or can be palliated. Examples of surgical care are an appendectomy for appendicitis, caesarian section for obstructed labor, shoulder repositioning after a dislocation, bone fixation after a fracture or incision and drainage of an abscess.

Calculations on cost-effectiveness have made clear that surgical care, often needed for people in their productive period in their live, is as effective in terms of averting Disability Adjusted Live Years (DALY) as measles immunization. [Gosselin 2006, McCord 2003] But today, 2 billion people live practically without any access to an operation room. [Funk 2010] Of the calculated 234.2 million operations per year, only 3.5 % are done for the 1/3 poorest population. [Weiser 2008] Surgically treatable conditions are recognized to be a substantial burden for a population and the burden of injuries, malignancies, congenital and pregnancy related complications have been estimated to be 11% of the total disability of the population. [Debas 2006] All these calculations are made based on extrapolation of global data, or based on prevalence of surgically treatable conditions presenting in the hospital data.

To date no population based data on surgically treatable conditions exists from low and middle income countries. Furthermore the Demographic Health Survey (DHS) does not include questions on surgically treatable conditions. [DHS Tanzania 2008, DHS Sierra Leone 2008, DHS Rwanda 2006] Therefore, the implementation of the Surgeons OverSeas Assessment of Surgical Need (SOSAS), a population based cross-sectional survey, is imperative and will provide the missing data on surgical need in LMICs. This data will in turn help to prioritize and allocate resources within Ministries of Health, global funds and nongovernmental organizations and ultimately strengthen the health care systems and save lives.

Surgeons OverSeas Assessment of Surgical Need (SOSAS)

SOSAS (addendum 1) is designed based on the Demographic and Health Surveys (DHS) guidelines and the WHO Guidelines for Conducting Community Surveys for Injuries and

Violence and the survey tool designed for road traffic injuries. [Mock 1999] This tool was revised to measure the prevalence of surgically treatable conditions, and subsequent evaluated and commented by the SOS International Surgical Research Group. This group consists of over 46 experts both from low and middle income countries as well as high income countries with global surgical interests and expertise. Questions in the survey addressing surgically treatable conditions are selected based on the following criteria. The surgically treatable conditions are (1) identifiable by the patient, (2) objective identifiable by examination and (3) general acceptable both ethically and culturally. We realize that the last point, selection criteria 3 might be different from culture to culture and therefore SOSAS will need to be adapted to local customs where ever it is going to be used. Furthermore we want to stress that not all surgically treatable conditions will be addressed in the survey and therefore the measured prevalence of surgically treatable conditions will be underestimating the real surgical burden of disease.

The survey is open-source for everyone to use to determine the prevalence of surgically treatable conditions in LMICs or specific regions. Updates will come available if pilot testing or research shows this necessity. www.humanitariansurgery.com

METHODOLOGY AND SAMPLING METHOD

No population data on surgically treatable conditions currently exists. To determine most precisely the sample size a pilot study of 100 individuals was done in Sierra Leone for 100 individuals and gave an estimation of 7.3% current surgically treatable conditions in need for surgical consultation, as measured by this survey. According to the outcome and the high response rate (96%) the sample size was calculated to be at least 3000 if possible 3300 individuals. As the survey is currently interviewing 2 individuals per household this means entering 1650 households. Below is the outline of the sample size calculations and methodology for sampling and assignment of household within the clusters.

Calculation of the sample size

The calculation is done on the basis of

$$n = z^2_{1-\alpha/2} P(1-P)/d^2$$

[Lwanga 1991] Below is the outline of the sample size calculation based on the 7.3% prevalence of surgical need found with this survey in the pilot test. This 7.3% was based on the following: 14 (14•6%) out of the 96 respondents, reported a surgically treatable condition at the time of interviewing; however seven of those identified reported also that they did not have a need for surgical care (eg the condition was minor or not bothering the person, or they consulted a hospital and an operation was not deemed necessary. Question why the person did not go or did not receive surgical care: Answer is: ‘no need’). The other 7 (7•3%) respondents were deemed to be in need of a consultation and possibly an intervention and are therefore referred to as the proportion of population in need for surgical care.

A. Sample size

The calculation is done on based on:
Kelsey1996 'Methods in observational Epidemiology' page337

$n = Z^2 p (1-p) / L^2$

n = sample size
Z = Confidence Interval (95% - Z is 1.96)
p = (estimated) proportion of the prevalence of the condition looked for (7.3%)
L = range excepted (1%)

$n= (1.96)^2 \times 0.073 \times (1 - 0.073) / (0.01)^2 = 2599.6$

Additional reasoning for the chosen figures of DEFF, Response rate and Eligible rate:

(1 + (n-1)/4976871) (1) x DEFF (2) x (1/response rate) (3) x (1/eligible rate) (4)= size to aim for
2599.6 x 1.3 x 1/0.95 x 1/0.95 = 3744.6 = 3745

Ad (1) The effect of the population size is very limited.

Ad (2) The rate of homogeneity in clusters (ROH) is not known and varies probably widely; this is closely linked with the design effect which again varies widely for the different surgical conditions asked for in the survey. We assume that surgical conditions are not very clustered, and therefore we chose a rather low design effect.
'Untreated-illnesses' might be clustered in those samples which are far from health care facilities or in the so called 'under served areas'. But this is something which will be explored ones the data comes back. Furthermore is healthcare available in urban areas but still costly, with a poverty rate of 70% in Sierra Leone it is still highly likely that untreated-illnesses are common even in the urban areas.

Ad (3) The response rate will be depending on the culture and quality of interviewing personnel as well as the quality of the supervision. In the pilot test in Sierra Leone we had a response rate of 96%.

Ad (4) The proportion of eligible includes the incomplete surveys not usable to be used in the analysis. From the pilot experience, the use of iPads and its conditional formatting, gives a low % of inaccurate/inconsistent data. Furthermore close supervision and daily download and checks will make a high proportion of interviews eligible.

Aiming for 3745 individuals where 2 individuals per household will be found eligible is 1873 household visits needed. With 75 clusters this means 1873 / 75 = 25 household per cluster.

You can choose to get more households per cluster or more clusters with fewer households, if this is logistically more practical. But this depends on budget, time and size of the clusters.

B. Sampling method for the clusters

SOSAS is a cross-sectional national population cluster based survey. Sampling will be done through a weighted random cluster design, where the probability of cluster choice is proportional to the population size. [Bennett, 1991 Henderson, 1982]

For Sierra Leone, the clusters will be randomly chosen in a two stage sampling process starting with the Chiefdoms and selecting the number of clusters needed out of the Chiefdoms proportional to the population size in the chiefdoms to further select, the Enumerator Areas (EA's) out of the Chiefdoms. This process of sampling will be done in collaboration with Statistics Sierra Leone. Who will also provide maps and coordinates for the assigned clusters.

C. Assignment of the households within the cluster

If maps of structures of the randomly selected EAs are available, those are used for randomly designing the first household to approach. Thereafter every fifth structure at the right side of the interviewed household while standing with the back to the front door is approached for the survey. In case of more households per structure an on-site listing is made and random assignment of the household is facilitated by the use of the random calculator (available on the iPad). If maps of structures are not available or out-dated an onsite structure count is made and random assignment of structures is given, by utilizing the random calculator.

To be able to have a weighted cluster sample each cluster should have the same household numbers interviewed. Therefore if a structure randomly chosen appears to be empty or the household does not give informed consent the next structure is approached to be interviewed. Records will be kept on households' and individuals' refusal to participate, for the analysis of the results.

D. Sampling of the individuals for the surgical questionnaire

Sampling of the individuals in the households starts after the determination of the household size / household denominator. The random number calculator will assign two household members to be surveyed.

If a person is selected but not available for interview an appointment is made for later that day or the following day (each cluster has minimal two interview days), if by the third appointment the person is still not available this person will be excluded from the analysis. When a person

selected for the surgical questionnaire is not giving the consent this is marked on the surgical questionnaire. No replacement is sought, within that household.

If both household members are not available, or do not give consent the next household will be approached to maintain the weighted sample size of households per cluster (e.g. 25 households in each cluster).

TIME LINE

A population based survey needs good planning and coordination. SOSAS is a simple tool with limited recourses and can be executed without the proposed iPads, but collaboration and coordination with local personnel and local timeframes is of great importance. The following timeline is a guide and includes most of the organizational aspects, but will per definition need adaptation for implementation in the geographic area of interest.

We estimate that the actual data gathering for the population based surgical survey can be done in 2 months, including recruitment and training of personnel. There are, however some procedures which needs to be done before the survey can take place, summoned:

- Research on the geographic area of interest and the surgical capacity
- Introduction of SOSAS to authorities and/or Ministry of Health and colleagues surgeons
- Translation of SOSAS into the local language(s)
- Ethical approval submission
- Budgeting

If all above is approved and completed the planning stages for implementation can continue with:

Recruitment of personnel (advisable to recruit up to 12 potential interviewers)	1 week
Training of recruited interviewers	1 week
Pilot testing and adaption of SOSAS to geographical area of interest	1 week
Actual survey with close monitoring of the interviewers	6-8 weeks

Take in account the following time for:

Data collection / verification and processing	1 week
Data analysis and statistics	1 week

After data-collection:

Report (for funders/grants) and/or article writing	2 months

If the data collection is done without iPads an additional 2 weeks might be needed for data entry purposes.

After the survey we hope the data will give the possibility for advocacy and will open discussion for possible improvements in the surgical system. Part of this includes:

- Donation of the findings of SOSAS to the Ministry of Health
- Submission of article to (peer-reviewed) journals
- Conferences or (online) discussion on the found information
- Implementation of improvements in the access to surgical care

ETHICS AND ETHICAL APPROVAL

This survey should be done by or in collaboration with local medical doctors, preferably surgeons. Approval is needed from the Ministry of Health (MoH) representing the targeted population or a locally assigned board for ethical approval. Introduction letters from the MoH or District Medical Officer or local officials, must be presented to the village chiefs and local administrators before interviewing households. Data found through the survey should be shared with the local surgeons, the MoH and/or district officials. This data can be shared via publications and in an open source data base, if local medical doctors or surgeons are included and approve.

Oral informed consent will be obtained from all participants in the study. This will be documented by the interviewer. While using the iPads a timestamp can be used for the informed consent to verify the time taken by the interviewer to explain the reason and the process for the interview. Individuals' rights for refusal of collaborations should be respected at all times during the interview and study.

BUDGETTING

Largest spending will be due to hiring personnel, but additional cost needs to be considered. Things to consider are listed below. The total budget will depend on local costs and available resources. IPads are very easy in use and SOS has developed a program for SOSAS to easily enter the data and directly process this data into an analyzing program. The bought iPads by SOS will be shared for use if wished. Interviews can also be done with pens and papers, but an additional cost needs to be calculated for extra consumables and data entry personnel.

Personnel Salaries and per diem:

Investigator(s)
Translators
Field supervisors
Interviewers
Drivers
Statistical support / Data management support

Transportation:
Vehicle rental
Fuel provision
Eventual costs (e.g. repairs, toll, ferries)

Processing material:
iPads (iPad 1, 3G, 16 GB can do, refurbished cost around 400$)
GPS (in the iPad 3G this will be included)
Computer for data analyzing

Consumables:
Stationary (e.g. paper, pencils, pens, printer, cartridges etc)
Identification cards
Photocopies of maps, listings and instruction manuals

Other:
Communication means (cell phones / SIM cards / internet connection)
Photocopies of training manuals
Advertisements (for personnel)
Workshop space and per diem, lunch
Ethical approval submission fee
Transportation cost of expats (if needed)

Contingency 10% of total.

PERSONNEL

The primary investigator can be a (local) surgeon/ medical doctor or public health scientist, preferably with experience and expertise in (population based) surveys and clinical knowledge to control the quality of the found data and knowledge of culture and customs.
Additional expertise might be needed for the statistical analysis, translation of SOSAS, recruitment and training of personnel and the daily managing of the interviewers during the actual survey. Below is an organogram with all the different key-roles which need to be fulfilled. One person can fulfill more roles and tasks can be shifted, depending on competences and interest.

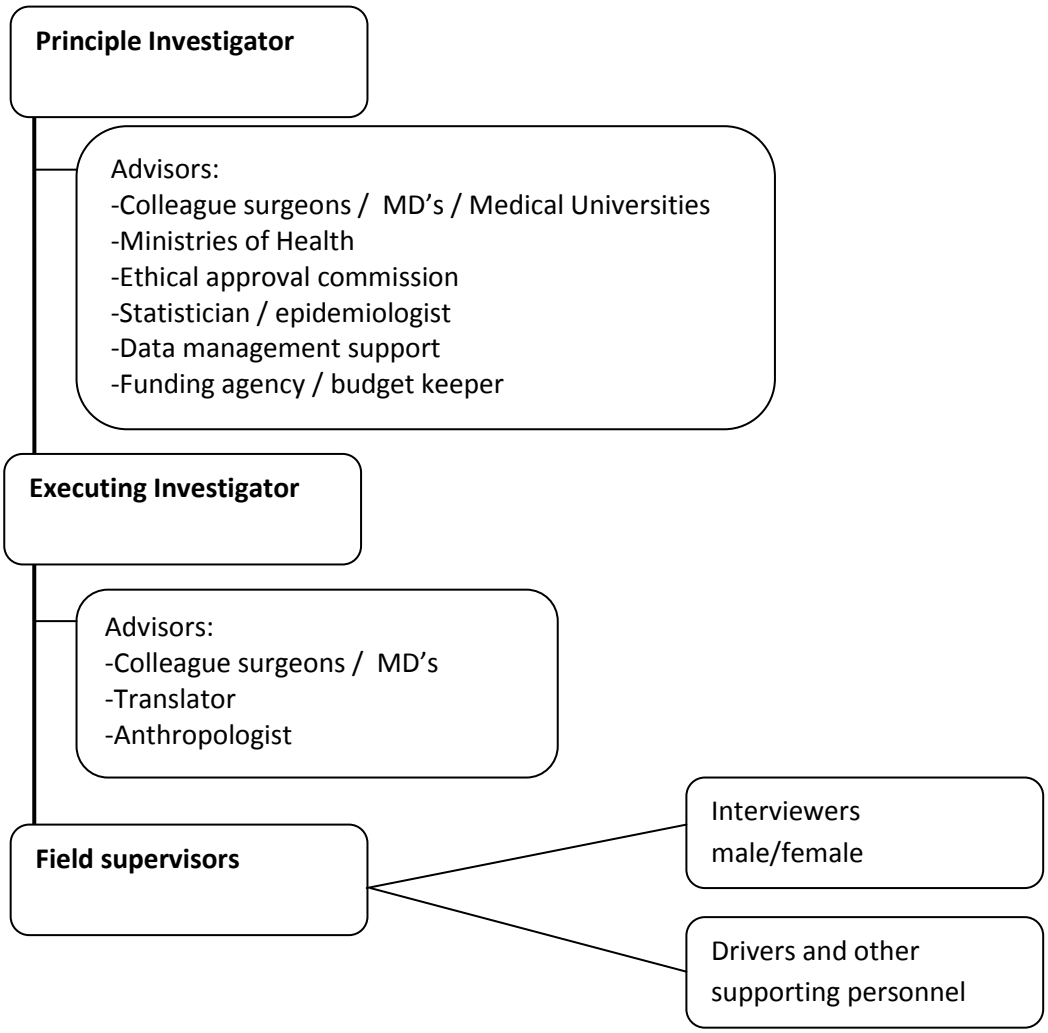
The **Principle Investigator** has the overview of the survey, is contact person for all the agencies which needs to be involved and has lead in the methodology, sampling, data analyzing and reports. Depending on the business of the Primary Investigator of great help can be an Executing Investigator.

The **Executing Investigator** can oversee the project on the executing level and will do the recruitment and training of personnel, payment and coordination of hired staff, assignment of clusters to interview teams and do the first data quality control.

Field-Coordinators can coordinate an interview team per cluster. Introduce SOSAS to the head of the village, set out the assigned households and when time and language permits, the field coordinator can help with the interviewing. He/she is also responsible for reporting progress during the interview weeks, and can help the Executing Investigator with the first data quality control. In case of a non-medical interviewers, which is possible but not preferable, it is of great importance to have a Field-Coordinator who is medically trained to be able to correct and explain inconsistency in data directly in the field. The Field-Coordinator is together with the Executing Investigator responsible for the quality of the interviews and should be randomly observe the interviewers during their interviews.

Depending on the final sample size for you area of interest, you will need 10 interviewers. Division of teams is depending on the languages, travel time and other logistical factors. Each interview team should at least have a Field-Coordinator, one male and one female interviewer and a driver. A translator is needed if there is need for additional translation. More interviewers per team will give the Field-Coordinator more chance of scheduling efficient interviewers within the cluster.

ORGANOGRAM FOR SOSAS-EXECUTION



Logistics of the interviews

One household is found to take approximately 30 minutes of interviewing the household representative and the two randomly assigned household members. Due to the fact that the interviewing is quite intensive for the interviewers we advise to schedule no more than 10 to 12 households per interviewer per day, to ensure data quality. The sample size of your clusters will than determine the time needed to complete a cluster. Additional time will need to be considered for traveling.

If the survey is done in a fast country, it might be wise to interview 6 days a week with stay-over in the different clusters, to minimize travel cost and time. Most cultures have a rest day in the week, this should be adhered to by the interviewers. Take also (national) holidays in account when making the interview schedule. Depending on the culture these holidays might also be good as interview days, since the household will be found complete and less rescheduling is needed.

Logistics will be a bit more complicated, and less economically, if a country has more than one language and not all the interviewers are able to speak those different languages and translation will not be available on village levels.

RECRUITMENT PROCESS / GUIDELINES

Interviewers need to understand the medical public health context for surgery and have basic knowledge on the surgical burden of diseases, which will be taught in the training course. Furthermore they need to be able to gain confidence while interviewing individuals and have good social skills. Medical students, nurses with working experience and public health students are ideal but use of other interviewers with limited medical knowledge is possible as well. Make sure all interviewers are able to write, read and do basic arithmetic.

Since every country may need to adapt SOSAS to the local situation, critical interviewers are needed to review the questions in the local context. Furthermore respondents on the interview should be able to express themselves in their own language therefore knowledge of minority language can be crucial point in recruiting. Reading ability in the local language is crucial if translated SOSAS forms are used. Experience in surveys is not parse needed but will be a pre.

Field-Coordinators should have higher education and ideally experience in coordinating field research and medical (medical student or nurse with experience or senior enumerators from the Demographic Health Surveys).

A good team of interviewers is essential for a successful survey. Each interview team is having at least two interviewers (male and female) and a field coordinator. More interviewers per team give the field coordinator more flexibility to assign households and supervise. If the interviewer are health technicians (medical student/nurse) a technical supervisor is not needed, otherwise the field-coordinator should fulfill this role and be selected based on his/her medical knowledge next to coordination skills.

The number of candidates to recruit is dependent on the country size (travel time needed and amount of languages in the country) and the length of time for the survey. In total 3300 respondents should be interviewed with this survey to get a good understanding of the surgical need. Working with too many interviewers is making the coherence of the study weaker and should therefore be avoided. A good balance between length of the study and coherence of the interviewers should be chosen. Nine to twelve interviewers, 3 drivers and 3 Field-Coordinator is probably sufficient.

Always hire 10% more staff than calculated to be necessary to have backup interviewers in case of drop out during the training. Sex and language capabilities should be taken into account when determining the number of backup interviewers, as well as travel time and thereby unexpected delay of return of interviewers.

Interviewers will be recruited as temporary employees and the contract including the salary should adhere to the local guideline for temporary employees. Local rules and regulations are also to be consulted in case of unexpected bad performance or absenteeism during the survey.

Finding interviewees

It is possible to place an advertisement in newspapers or magazines. An announcement may be placed on bulletin boards at universities. Some countries have employed students; in this case the timing and duration of the field work will need to be planned according to their school breaks, and there may be little flexibility in the schedule. Word of mouth may also be an effective way of finding candidates, but may result in pressure to hire certain individuals who have personal contacts, but maybe not the best interview skills. A medical dean or senior medical staff might now good medical students to include for the research based on their interpersonal skills in their rotations. Consider recruiting locally through branch offices. There are two main advantages to recruiting in the same region where the interviewers will be working. The first is that it will be easier for field staff to visit their families on free days. The second is that if there are regional language variations, it may be easier to find speakers of the local languages.

Selecting interviewers

The selection of interviewers should be composed of three main parts: (1) an application form, (2) test and an (3) interview with role play. This standardization of the selection process will help you pick the best candidates and will also provide a sound excuse if there is pressure to hire an individual who does not have the proper skills or qualifications.

In addendum 2 we provide a standard application form. While assessing the forms one can check the ability of writing skills (neatness of writing skills), understanding the questions and assess the educational level and computer skills. Based upon selection through the application form double the amount of people you need, for a test and successively a role play and interview.

Addendum 3 gives a short written test, to assess the candidate's ability to become a good interviewer and the ability to understand the aim of the study after reading a short introduction. The test should be translated in the language(s) of use during the survey. It is important to assess a potential interviewer for reading and writing in the language(s) used.

The interview should include a role-play, which is needed to assess the potential interviewer for speaking proficiency and the ability to understand direction. In addendum 4 we have 3 questions with invented answers from SOSAS to test the ability to explain, reword or rephrase questions

and their patience when respondents don't have an immediate answer ready. Basic computer skills are needed if the iPad is used for data entry. Knowledge of the iPad is not a requisition because this will be part of the training.

Other items to talk about during the interview (which should be consistent with the application form) are:

General information

1. Formal educational attainment.
2. Special training (if considered applicable).
3. Previous work experience including the employer and the specific duties of the position.
4. Knowledge of specific languages and level of proficiency in reading and speaking.
5. To test proficiency in a language: 1) converse in the language for a few minutes, or 2) ask the candidate to read aloud several questions written in the language and then provide answers.
6. Availability for duration of survey period (Careful questioning can help identify individuals who know that they will not be available during the whole period.)
7. In cases where a candidate is proposing to take a leave of absence from a permanent job, survey organizers may ask the candidate to submit a letter from their employer stating that they will be given a leave of absence for the required dates.
8. When asking candidates about their availability, remember that surveys often run over the expected amount of time.

Daily schedule

1. Explain that this job requires significant hours on the evenings and weekends.
2. Ask if she is willing to work whenever needed.

Willingness to be posted to a rural area/different part of country

1. Explain that interviewers will be based around the country, some in rural areas.
2. Ask if there are places she is not willing to work.
3. If a candidate is likely to be posted to a certain part of the country (based on language ability, for example), make sure to mention this in the interview.

Physical fitness

1. Explain the physical requirements of the job (including extensive walking and carrying equipment).
2. Ask if the candidate is physically able to handle the job.

Goals and interests

1. Ask the candidate why she wants the job.
2. Discuss how this experience can help the candidate achieve future goals.

There must also be a subjective component to the interview process. In particular, try to understand whether or not the candidate has the following personal attributes: Interviewers must approach strangers and conduct interviews with people from a variety of backgrounds. The 'interviewer's dress' should allow him/her to fit into the communities in which she will be interviewing. Also, because of the content of the interviews, it may be a distinct disadvantage if interviewers look too young. The field staff will spend most of their work time alone and will have to use their judgment on a daily basis. Each fieldworker needs to be mature enough to handle the problems that inevitably come up in the field.

End the interview with the invitation to questions for the candidate. Since the interview is also a way for candidates to find out what they want they should be informed about the requirements, conditions of the field work and salary range and payment schedule. It is good to hand out a basic information sheet with this information to all candidates, after consulting the local guidelines regarding temporary employment payment.

As said earlier, recruit more interview staff than necessary for the survey as backup and fall out. During the training week you will be able to assign the roles of supervisor / interview staff and some recruited personnel might already drop out due to absenteeism. Be clear about the expectations and schedule of the training period and salary during data collection. Interviewers should leave for the survey into the field with full knowhow and knowledge about interviewing and the aim of the study and knowing their personal gain to be well motivated. This is the only way to achieve good quality data. For more information about the training of the recruited personnel we refer to the TRAINING MANUAL FOR SOSAS.

DATA SHARING / PUBLISHING

The direct aim of the SOSAS survey is to generate baseline data on surgical need in low and middle income countries. Successively this data can be used in advocacy and health-planning by Ministries of Health and donating agencies. Therefore it is important to share the outcome of the survey with all agencies (MoH, surgical institutions, medical schools etc) involved in the surveyed geographic area. Publishing in (peer-reviewed) journals can be part of the advocacy and data sharing. Good collaboration with health officials in publishing material is warranted and authors of the article should include local (surgical) colleagues.

Surgeons OverSeas aims to collaborate in all activities improving surgical capacity, therefore this survey is open access and everyone is free to adjust the survey to local needs. Mentioning the origin of SOSAS and/or collaborating in publishing is appreciated.

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ADDENDUM 1

For the latest SOSAS version we refer you to www.surgeonsoverseas.org or email reinou@humanitariansurgery.org

ADDENDUM 2 ADVERTISEMENT FOR INTERVIEWERS

The prevalence of surgical treatable conditions in this country is currently unknown. We are seeking interviewers who can help to gather information about the prevalence of surgical conditions within the population. Surgical operations have the capacity to help treat those with different types of swellings, masses, ulcers, wounds, injuries, or obstetrical complications, with the opportunity to offer both curative treatments and life saving care.

We want to know how many people have had an operation or who is in need for surgery. A structured interview is developed and will be done throughout the country in XXXX (beginning month of the interviews) through XXXX (ending month of interviews) via a population based survey. A one week training is obligatory and will be provided XXXXXX (date and time)

Are you a medical student or health care worker with good interview skills? Join our interview teams as interviewers or Field-Coordinator, application forms can be collected from…… (office address) or call ……..(local telephone number). After an initial assessment of the application forms, selection of the candidates will be depending on a short written test and interview.

Deadline: …….(date)

Executing Investigator:……(name) ……(signature)

APPLICATION FORM FOR POTENTIAL INTERVIEWERS.

Contact information:

Surname/family name: First name:
Age: Sex: male / female (encircle)
Telephone number:

Educational back ground:

Additional training:

Previous experience:

Language skills:

Availability:

Goals and Interest / Reason for applying:

ADDENDUM 3 SHORT WRITTEN TEST FOR POTENTIAL INTERVIEWEES FOR SOSAS

Name of applicant: Age: Sex:
Telephone number:

Question 1: What is the task of a surgeon?

Question 2: List 5 examples of surgical interventions
1.
2.
3.
4.
5.

Question 3: For an interview conducted in March 2000, which of the following persons have consistent information? Encircle the right answer:

	Mo. of Birth	Yr. of Birth	Age
a)	01	94	7
b)	10	75	25
c)	02	82	18
d)	08	52	48

Question 4: What is synonym for what? OR What explains what? Link the following words from list A with a the synonym or explanation from list B

A	B
Femur	A problem the person is born with
Disability	Stinking not healing wound
Humerus	Bone in upper leg
Ulcer	Swelling in the groin
Hernia inguinalis	Bone in upper arm
Congenital	Physically challenged

Question 5:

A. How many decimeters is 30 centimeters? ……
B. How many centimeters are in a meter? .....
C. How many milligrams are in a gram? ……..……

Question 6:
What is the difference between open and closed questions?

ADDENDUM 4

Questions from an earlier SOSAS version with structured invented answers for role playing during the interview of potential interviewees.

1. Have you had any surgery in the past: Yes / No

(Response: what is that? The applicant should be able to explain surgery in an informative non judgmental way. After that tell that you went to the hospital when you broke your bone: the applicant should encircle 'Yes'.)

2. What was done in the hospital, for your broken bone?

A. Casting/sling

B. Reposition

C. Operation

D. Traction

E. Other

(Response: I went to a hospital and stayed there for a long time. The applicant should ask further about what happened in the hospital and find out that traction was applied for your femur fracture (upper leg fracture) and encircle D)

3. Is this problem still having an impact in your life? (read the options outload)

A. Yes, I need help in my personal needs. (washing/dressing/eating)

B. Yes, I need help with transportation (walking with a stick/guidance/carriages)

C. Yes, I'm not able to work I use to do; please specify_____

D. Yes, I feel ashamed

E. Yes, Other; please specify_____

F. No, the fractured bone is not disabling.

(Note how the question is phrased whether the person gives you all the options. Are you able to do washing and dressing? Do you need help or an aid with walking? Can you do your work? Do you feel ashamed? Is there still something bothering you about that fracture. Response: I'm fine now but the first months I needed to walk with sticks. The applicant should ask if the stick is still needed. Response: no Correct answer: F.)