





Guidelines for the National Screening Program for Autistic

Spectrum Disorder (ASD) and other Developmental Disorders.

First Edition 2018

Preface:

Improving the status of children's health is recognized as fundamental for family, community and for the nation. There is a strong rationale for considering children as high priority groups for health improvement especially children with disability where Autistic Spectrum Disorder (ASD) and other developmental disorders are one of them. A National Strategic Plan for Autism in Oman was given by Pr. Eric Fombonne) and one of the recommendations was to implement systematic screening for ASD. Later on, early screening for ASD and other developmental disorders was launched on September 2016.

Hence, in order to build and strengthen the capacity of health care providers to recognize children with ASD and other developmental disorder, the Department of Woman and Child Health, MOH– Oman developed this Guideline.

The guideline describes the screening tool (M-CHAT/R) and the scoring system with clear algorithms of case management and referral pathway. It works as a guide containing clear job descriptions of each health providers involved on the screening program. The guideline should be kept in close vicinity of service provision and all health care providers should read it carefully.

This guideline is not meant to replace text books. Hence, whenever detailed information is required, textbooks and other latest references should be used for gaining in-depth knowledge and understanding of the subject.

The guideline is based on the work done by members from Ministry of Health; Department of Woman and Child Health, Department of Non-Communicable disease and colleagues from Royal Hospital and Sultan Qaboos University Hospital. We are thankful to all those who have contributed to this manual and constructive suggestions for improving and updating it further will always be gratefully received for the future.

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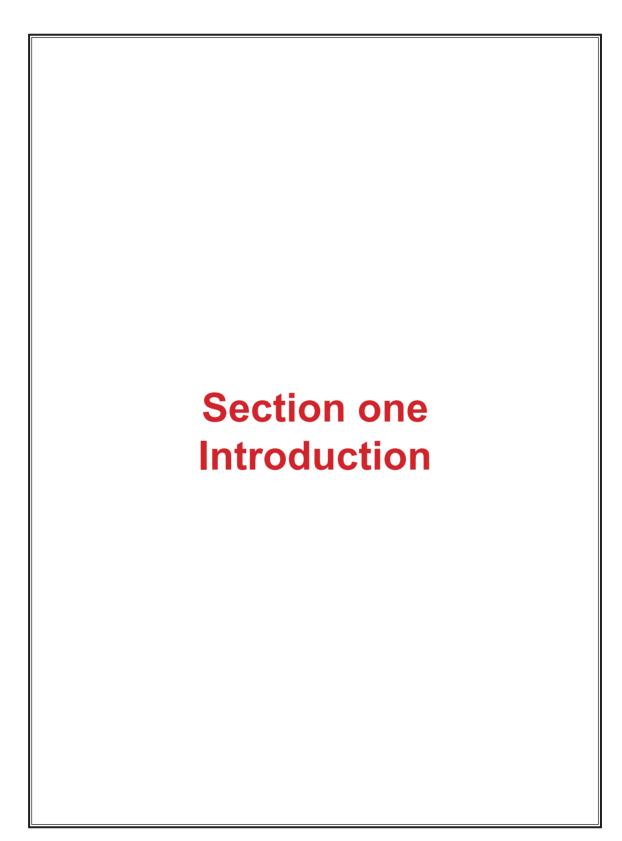
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List of Abbreviations

ADI-R	Autism Diagnostic Interview, Revised
ADOS	The Autism Diagnostic Observation Schedule
ASD	Autistic Spectrum Disorder
EPI	Extended Program on Immunization
ENT	Ears, Nose, Throat Clinic
GCC	Gulf Cooperation Council for Arab States.
ICD	International Classification of Disease
IQ	Intelligence Quotient
M-CHAT	Modified Checklist for Autism in Toddlers
M-CHAT/R	Modified Checklist for Autism in Toddlers, Revised
M-CHAT-R/F	Modified Checklist for Autism in Toddlers, Revised /Follow-Up
МОН	Ministry of Health
РНС	Primary Health Care
RH	Royal Hospital
SQUH	Sultan Qaboos University Hospital
AMH	AL Masarra Hospital
WHO	World Health Organiztion
UNICEF	United Nations Children's Fund



Section One: Introduction

Autism Spectrum Disorder (ASD) consist of a range of conditions characterized by some degree of impaired social interaction, verbal and non-verbal communication, and a narrow range of restricted interests and activities that are both unique to the individual and carried out repetitively ¹.

The presentation of ASD varies along a continuum from mild, requiring minimal support to severe and requiring substantial support. Likewise, levels of ability vary along a continuum ranging from average to above average intelligence, to those with mild, moderate and severe intellectual disability. Due to this broad spectrum, the impact of ASD varies from person to person and from family to family ².

Based on epidemiological studies conducted over the past 50 years, the prevalence of ASD appears to be increasing globally. There are many possible explanations for this apparent increase in prevalence, including improved awareness, expansion of diagnostic criteria, better diagnostic tools and improved reporting ². There have been a limited number of studies conducted in the Middle East and specifically the Gulf Cooperation Council (GCC) for Arab States. A systematic review of the epidemiology of autism in the GCC was conducted in 2014 and reported a prevalence rate ranging from 1.4 to 29 per 10,000 individuals ³.

In May 2014, the Sixty-Seventh World Health Assembly adopted a resolution entitled "Comprehensive and coordinated efforts for the management of autism spectrum disorders (ASD)," which was supported by more than 60 countries. The resolution urges WHO to collaborate with Member States and partner agencies to strengthen national capacities to address ASD and other developmental disorders.

The diagnosis of ASD is based on behavioral observations and the developmental history. There are no blood tests or biomarkers that can diagnose the presence of ASD. The diagnosis has become a matter of special expertise. It is performed by multidisciplinary teams that bring together different disciplines such as pediatrics, child psychiatry, child neurology, audiology, occupational therapy, speech and language therapy, dietician, genetic counseling. The doctors who diagnose have a special expertise in ASD that is obtained with extra-training beyond their basic training. There are specific diagnostic tools and assessment techniques that need to be learnt by ASD professionals (such as the ADOS, ADI-R, particular cognitive tests, etc.) and need to be followed⁴. There are two major diagnostic classification systems in current use, the International Classification of Diseases, version 10 (ICD-10) and the Diagnostic and Statistical Manual of Mental Disorders 5th edition (DSM-5).

Although there is no cure for ASD, Evidence-based psychosocial interventions, such as behavioural treatment, can reduce difficulties in communication and social behaviour, with a positive impact on wellbeing and quality of life. Major efforts have been made to detect and diagnose ASD at an earlier age in most countries as it is critical to intervene early in order to maximize the efficacy of available interventions.

There is international consensus that early educational and behavioral interventions are indicated in ASD as soon as a diagnosis is made and as early as possible⁴. Most techniques adopt principles of Applied Behavioral Analysis (ABA), a theory based of operant conditioning that is used widely in a range of psychological/educational interventions. They are typically applied in preschool years (between ages 18 months to age 6 years), intensively.

Autism Spectrum Disorder (ASD) are more prevalent that often stated. Current estimates on the prevalence of ASD vary from 0.7% to 1.5%, with some studies showing rates outside

this range ⁴. This is the case for Oman where the only prevalence study published thus far showed a very low estimate of 1.4/10,000 and was based on 193 cases identified in the whole country ⁷. Since that study was published, services have developed. The numbers of cases diagnosed in the two clinical centers; Sultan Qaboos University Hospital (SQUH) and Al Masarra Hospital (AMH) already amount to over 1,200 children, which is still a very incomplete count of the true number of cases in the population ². Based on this number only, the prevalence is already six-fold higher than that published earlier, and this is still a gross underestimate.

The Burden / Impact of ASD

Raising a child with an Autism Spectrum Disorder (ASD) can be an overwhelming experience for parents and families. The pervasive and severe deficits often present in children with ASD are associated with a plethora of difficulties in caregivers, including decreased parenting efficacy, increased parenting stress, and an increase in mental and physical health problems compared with parents of both typically developing children and children with other developmental disorders.

Children with autism, as they grow, may experience medical problems (epilepsy, gastrointestinal disorders, sleep disorders, obesity and diabetes type II, etc..) as well as psychiatric problems (aggressive behaviors, ADHD, anxiety, self-injurious behaviors,...) which will put more burdens on the family to deal with and for the health care system which must provide a response in the form of facilitated access to specialist care and professionals who can deal with this specific client group ².

The economic burden associated with ASD is substantial, treatment is extremely expensive. Although there is no cure for ASD, there are plenty of claims that promote

'pseudo-treatments' that do not work.

Indeed, children with ASD and other neurodevelopmental disabilities have a fundamental right to education in order to achieve their potential at its best. This fundamental right to education cannot be compromised, and it is endorsed by major international organizations such as WHO, UNICEF and others. The lack of educational opportunities leads to increased impairments, additional individual and societal costs, stress and misery ⁴.

Screening Program in Oman

Screening tools available for clinicians and parents can now detect a reasonable proportion of children with ASD between (16-30 months). They consist of simple checklists completed by parents and followed-up by primary physicians; they take no time and have no cost. Several countries have issued recommendations for pediatricians and all primary physicians to perform universal screening, meaning that every child coming for a well-baby visit or an immunization visit should be screen for ASD during this critical age window, irrespective of the presence or absence of developmental concerns ⁴.

Since September 2016, Ministry of Health has established a national screening program for Autistic Spectrum Disorder (ASD) by using the M-CHAT/R & (M-CHAT-R/F). The aim is to screen all children visiting the health institution for the routine well-baby visit at 18 months.

M-CHAT (Modified Checklist for Autism in Toddlers) is a validated developmental screening tool for toddlers between 16 and 30 months of age. It is designed to screen children for autism and other developmental disorders. It has been validated for Omani Children through a study done by Sultan Qaboos University Hospital (SQUH) team; Dr Watfa Al-Mamari, Dr Ahmed B. Idris and Ms. Muna Al Jabri.

Goals and objectives of early screening for ASD

Goal:

Improving quality of life of children with Autism Spectrum Disorder (ASD) and other developmental disorders through early identification and management.

Objectives:

- To identify children at risk of Autism Spectrum Disorder (ASD).
- To achieve early diagnosis and intervention for autistic children.

Service provision

Target Group

The aim is to screen all children visiting the health institution for the routine well-baby visit at 18 months starting from September 2016.

Service component:

The focus upon key themes which are recognized as vital to effective service delivery, and include:

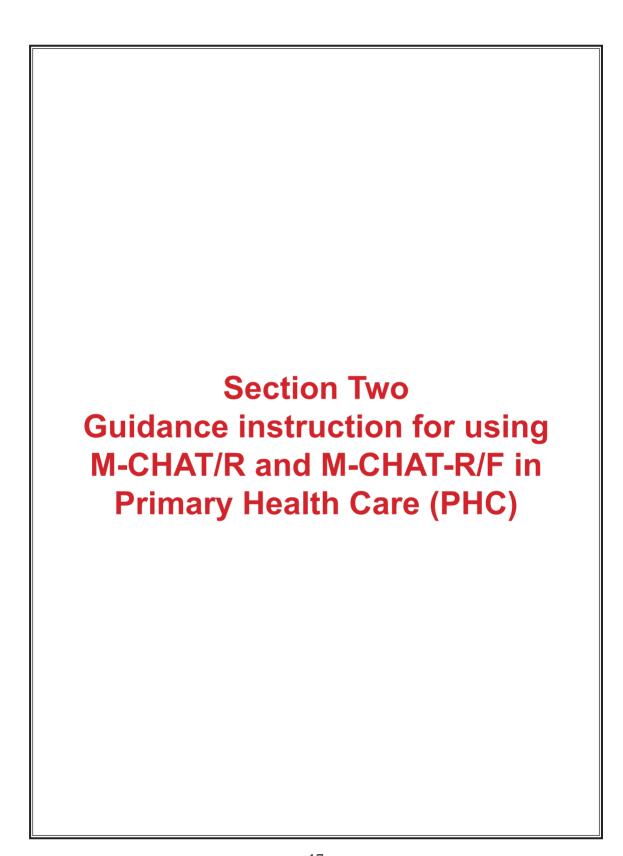
- Launching the early screening service in primary health care,
- Establishing a referral system between health care levels,
- Diagnostic services at diagnostic centers,
- Early intervention and rehabilitation services and
- Increasing awareness and understanding of ASD and providing support for families.

Screening tool:

The national screening program for Autistic Spectrum Disorder (ASD) will be provided by using the M-CHAT/R & M-CHAT-R/F. M-CHAT/R is a validated developmental screening tool for toddlers between 16 and 30 months of age (Annex 1). It is designed to screen children for developmental delay and autism. They consist of simple checklists completed by parents and followed-up by primary physicians. M-CHAT-R/F is designed to be used with M-CHAT/R as a Follow-Up questions in the second –stage screening (Annex 2). The use of the Follow-Up M-CHAT-R/F is strongly recommended for children who screen positive particularly for scores in the mid-range (total scores of 3-7).

Who will provide the screening service?

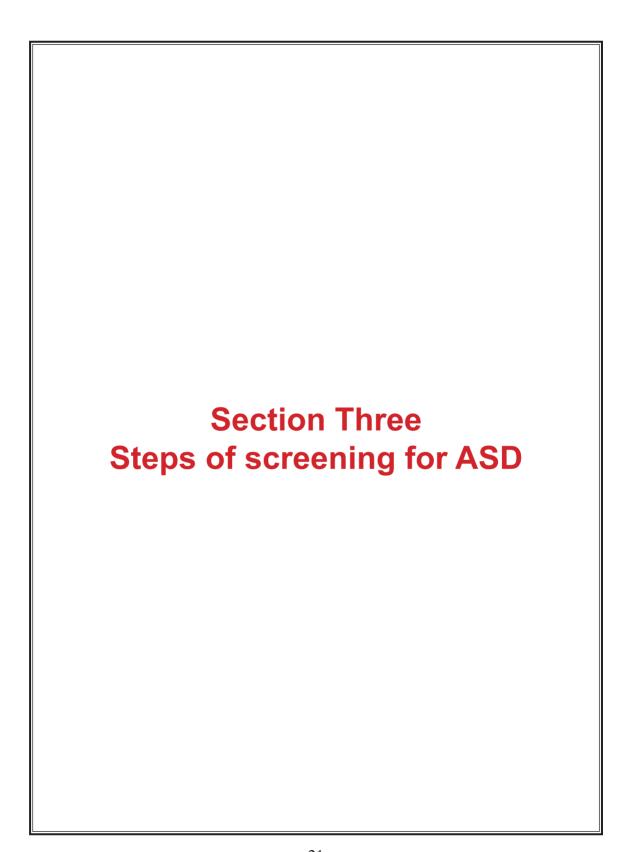
This screening service will be integrated with the Extended Program of Immunization (EPI) service in all Primary Health Care institutions. The EPI staff nurse will administered the M-CHAT/R questionnaires for parents/care givers of children at 18 months visit, then scoring will be done. The primary physician at PHC will review children at risk and refer them to further evaluation accordingly. Diagnostic evaluations will be carried out on one of the tertiary/specialized hospitals (Royal Hospital, AL Masarra Hospital and Sultan Qaboos University Hospital).



Section Two: Instructions for using M-CHAT/R and M-CHAT-R/F in Primary Health Care (PHC)

- The M-CHAT/R (Modified Checklist for Autism in Toddlers, Revised), can be administered and scored as part of a well-child care visit, and also can be used by specialists or other professionals to assess risk for ASD.
- The M-CHAT/R and M-CHAT-R/F is valid for children 16-30 months old. Children who outbound the recommended age group or presented late than 30 months follow the routine referral done by the physicians at PHC setting.
- The M-CHAT/R and M-CHAT-R/F must be used in its entirety. Items may not be extracted to shorten the questionnaire.
 - The M-CHAT/R can be filled in 5-10 minutes and scored in less than two minutes.
- The primary goal of the M-CHAT/R is to maximize sensitivity, meaning to detect as many cases of ASD as possible. Therefore, there is a high false positive rate, meaning that not all children who score at risk will be diagnosed with ASD.
- The false positive cases are the medium risk group (total scores of 3-7) indicated in orange color in the management algorithm and hence to address this, the (M-CHAT-R/F) is designed to be used with M-CHAT/R as a Follow-Up questions in the second –stage screening.
- Users should be aware that even with the Follow-Up, a significant number of the children who screen positive on the M-CHAT/R will not be diagnosed with ASD; however, these children are at high risk for other developmental disorders or delays, and therefore, evaluation is warranted for any child who screens positive.

- The use of the Follow-Up (M-CHAT-R/F) is strongly recommended for children
who screen positive particularly for scores in the mid-range (total scores of 3-7).



Section Three: Screening for ASD in two steps

1-At health institutions providing immunization service

A- EPI Clinic

- Apply the M-CHAT/R screening questionnaire for:
- i. All children coming for the 18 months visit.
- ii. Any child of the age group (16-30 months) visiting the health institution for any reason, to increase the coverage of the screening.
- Counsel the parent/caregiver about the screening questionnaire in waiting area, explain the objective of this national screening program.
- Give a copy of the M-CHAT/R screening questionnaire to the parent/caregiver and ask them to fill it in 10 minutes.
- Read the questionnaire to illiterate parents.
- Audit the filled questionnaire ensuring that it is filled completely and all questions have been answered.
- Ensure to record the parents/caregiver contact information and answer any quarries by the parents/caregiver.
- Calculate the total result following the scoring guideline.
- Update the parent/caregiver about the result and the action required.
- Arrange with the primary physician a follow up visit if needed according to scoring guideline of the M-CHAT/R. (Send all children with medium score group (total score 3-7) and children with high risk group (total score 8-20) to primary physician in same institution) who will open a visit and refer them to specialists as explained below on the role of primary physician.

- Follow up the appointment from polyclinic/local hospitals or tertiary hospitals if the parents not received any by two weeks.
- Recall parents for the screening if the child has missed the screening at 18 months
 of age.
- Save the filled questionnaires in a private and confidential file in your institution.
- Keep a copy of questionnaires of all positive cases in medium and high risk group.
- EPI staff nurses trained on the national workshop have the responsibility to orient and train other EPI staffs on their Governorates. The aim is to orient all EPI staffs about this screening program
- Refer the child as a usual referral to the pediatrician if there is any suspicion of ASD afetr the age of 30 months.
- Apply M-CHAT/R Questionnaire to any child with developmental delay/genetic disorders specifically: Fragile X Syndrome, Tuberous Sclerosis, Epilepsy, Down Syndrome, etc at the age of 30 months or ones the child started walking
- M-CHAT/R questionnaire to be done in the parent's institutions even if the child has
 received the 18 months vaccination in another institution.

B- Primary Physician

- Review all children at high risk group (total score 8-20), open a visit and refer them urgent and direct to the specialized center/tertiary hospital (Development Clinic at Royal Hospital, Child Psychatric Clinic at AL-Masarra Hospital, Development Clinic at Sultan Qaboos University Hospital) for diagnostic assessment through the following process:
 - Direct the E-referral to pediatrician at Regional Hospital, print the referral form, cross/delete the name of the Regional Hospital and instead write the name of either (Royal Hospital, AL-Masarra Hospital, Sultan Qaboos University Hospital) according to

the distribution list (annex 3).

- □ Write clearly on the E-referral that referral is directed to the above mentioned Tertiary Specialized Hospitals including the contact number of the parents/care giver, so no duplicate appointment will be given by Regional Hospital and send it by fax (fax # available on management algorithm, annex 4).
- ☐ Inform the parents that they should receive a text message through mobile with the appointment date, if not by two weeks, they should contact the EPI nurse which will follow up the appointment at the tertiary hospitals.
- Refer all children at high risk group (total score 8-20) to ENT specialists at Governorate for hearing assessment and to document the result in the child health record (special investigation record)
- Refer all children at high risk group (total score 8-20) to receive rehabilitation care support in social development centers (Form A, annex 5). The letter should to be signed by the primary physician and stamped by the health institution's stamp. The parents/caregiver to be directed to the available rehabilitation centers in their Governorates (annex 6).
- Review all children with medium score group (total score 3-7), open a visit and refer them urgent to the pediatrician at Polyclinic/Local Hospital to do the follow up screening (M-CHAT-R/F). Primary Physician to stab the M-CHAT/R of the child with the appointment paper indicating on the questionnaire the questions which are failed on and keep a copy of the M-CHAT/R questionnaire on the recall file with EPI staff.

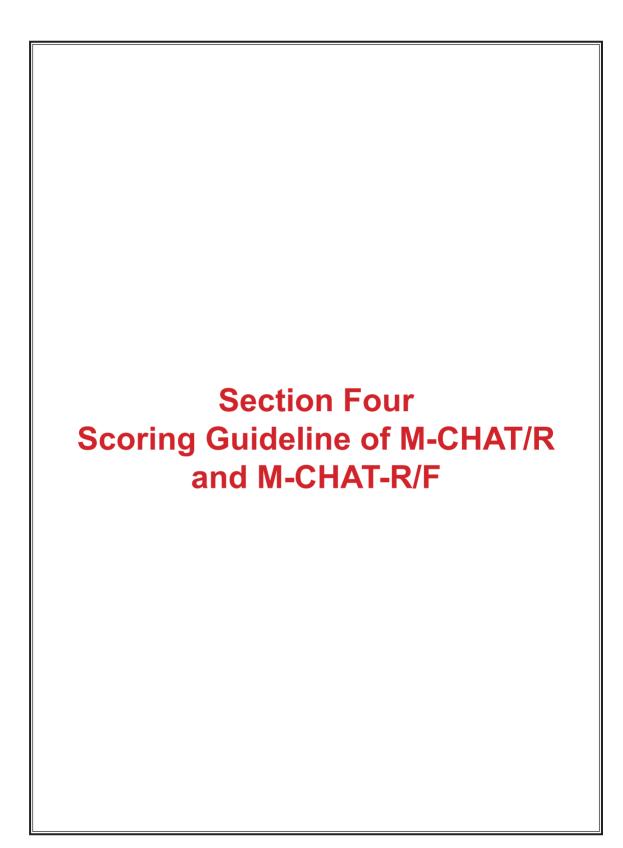
2-At Pediatric clinic at Polyclinic/Local Hospitals

- Review all children in medium **risk group** (**total score 3-7**) and administer the follow-up (M-CHAT-R/F questionare) to get additional information about the at risk response.
- Follow the scoring guideline of the M-CHAT-R/F (Modified Checklist for Autism in Toddlers, Revised with Follow-Up (M-CHAT-R/F)TM and do the M-CHAT/R items which the child failed on.
- Each page of the follow-up (M-CHAT-R/F)TM pages explain one item of M-CHAT/R items. Follow the diagrams and ask questions until you get success or failure result. (Note that parents may answer "maybe" responding to questions during M-CHAT-R/F assessment). When a parent reports "maybe," ask whether most often the answer is "yes" or "no" and continue the interview according to that response. Pediatrician should decide if the child get success or failure result for each item of the assessment and record all answers on the M-CHAT-R/F.
- If score on Follow-Up M-CHAT-R/F is (0-1), child has screened Negative. No further action required unless surveillance indicates risk for ASD.
- If score on Follow-Up M-CHAT-R/F remains at **2 or higher**, child has screened **Positive**. Send urgent E-Referral for the child to the specialized center/Tertiary Hospital either (Royal Hospital, AL-Masarra Hospital, Sultan Qaboos University Hospital) for diagnostic assessment through the following process:
- Direct the E-referral to pediatrician at Regional Hospital, print the referral form, cross/delete the name of the Regional Hospital and instead write the name of either (Development Clinic at Royal Hospital, Child Psychatric Clinic at AL-Masarra Hospital, Development Clinic at Sultan Qaboos University Hospital) according to the distribution list (annex 3).

- Write clearly on the E-referral that is directed to the above mentioned tertiary/ Specialized Hospitals including the contact number of the parents/care giver and send it by fax (fax # available on management algorithm, annex 4).
- Inform the parents that they should receive a text message through mobile with the appointment date, if not by two weeks, they should contact the clinic which will follow up the appointment at the Tertiary Hospitals.
- Refer all children who score positive on Follow-up M-CHAT-R/F (=>2) to ENT specialists at Governorate for hearing assessment.
- Refer all children who score positive on Follow-up M-CHAT-R/F (=>2) to receive rehabilitation care support in social development centers (Form A, annex 5). The letter should to be signed by the treating physician and stamped by the health institution's stamp. The parents/care giver to be directed to the available rehabilitation centers in their Governorates (annex 6).

Role of physicians at specialized centers/Tertiary Hospitals

- Review all referred cases (high risk group, and medium risk group who score positive on Follow-up M-CHAT-R/F (=>2) and do the needful diagnostic assessment.
- Refer all children diagnosed with Autism or other developmental delay to receive rehabilitation care (Form B, annex 7). The letter should to be signed by the treating physician and stamped by the health institution's stamp. The parents/care giver to be directed to "Al Aman" Rehabilitation center in Muscat (General Directorate of People with Disabilities) or the available rehabilitation centers in their Governorates (annex 6).



Section Four : Scoring Algorithm of M-CHAT/R and M-CHAT-R/F

1- Scoring of M-CHAT/R

For all items except 2, 5, and 12, the response "NO" indicates ASD risk.

For items 2, 5, and 12, "YES" indicates ASD risk.

The management algorithm maximizes psychometric properties of the M-CHAT/R (annex 4):

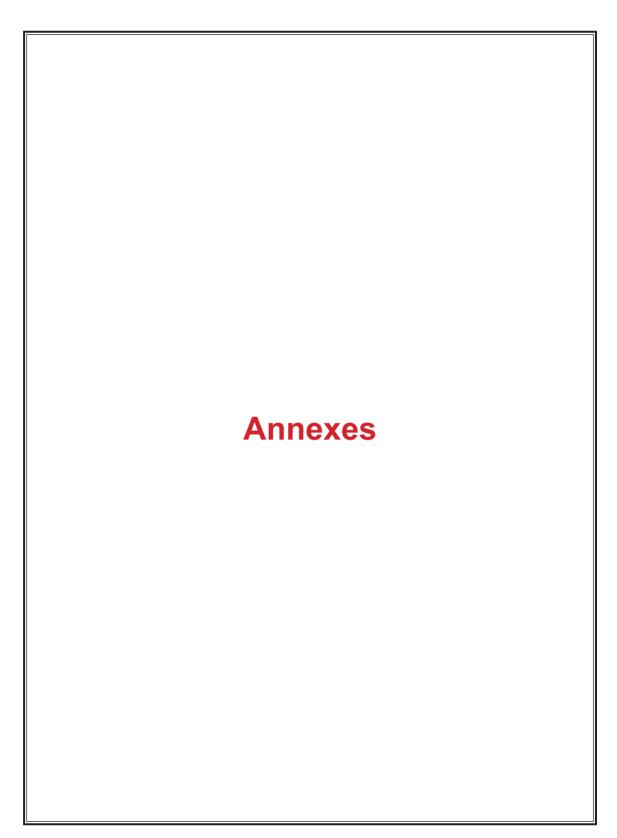
LOW-RISK: Total Score is 0-2; if child is younger than 24 months, screen again after second birthday. No further action required unless surveillance indicates risk for ASD.

MEDIUM-RISK: Total Score is 3-7; Pediatrician at Polyclinic/local hospitals to administer the follow-up (second stage of M-CHAT-R/F) to get additional information about at risk responses. If M-CHAT-R/F score remains at 2 or higher, the child has screened positive. Action required: refer child for diagnostic evaluation and eligibility evaluation for early intervention. If score on Follow-Up is 0-1, child has screened negative. No further action required unless surveillance indicates risk for ASD. Child should be rescreened at future well-child visits.

HIGH-RISK: Total Score is 8-20; it is acceptable to bypass the Follow-Up and refer **urgently to Tertiary Hospitals** for diagnostic evaluation and eligibility evaluation for early intervention.

2-Scoring of M-CHAT-R/F:

- **Negative score:** If score on Follow-up M-CHAT-R/F is (0-1), child has screened Negative. No further action required unless surveillance indicates risk for ASD (annex 4).
- **Positive score:** If score on Follow-up M-CHAT-R/F remains at 2 or higher, child has screened positive (annex 4). Send **urgent** E-Referral for the child to the specialized center/Tertiary hospital either (Development Clinic Royal Hospital, Child Psychiatric Clinic AL-Masarra Hospital, Development Clinic Sultan Qaboos University Hospital) for diagnostic assessment according to the distribution list (annex 3).



Annex 1: (M-CHAT-R)

التاريخ :		الإسم / الرقم التسلسلي	
	M-CHAT/R Illustrated Omani Version النسخة العمانية المعززه بالصور (30.16 شعر)		_

من فضلك أجب عن هذه الأسئلة الخاصة بطفلك .يرجى الوضع فى الاعتبار كيف يتصرف طفلك عادة .اذا كان التصرف نادرا ، وليس دائما اجب ب"لا ."من فضلك ضع دائره حول نعم أو لا أمام كل سؤال

¥	نعم	البند	الرقم
¥	نعم	لو أشرت على حاجه فى الغرفة ، هل يشوف/ ينظر طفلك عليها؟ (مثلا : اذا أشرت له إلى لعبة أو حيوان , هل يشوف طفلك على اللعبة أو الحيوان؟)	٠.١
¥	نعم	هل حسیت/شککت فی یوم أن طفلك (ما یسمع) أصم؟	۲.
Y	نعم	هل يلعب طفلك لعبا تخيليا ؟ (مثلا، يشرب من كوب فاضي، يتكلم فى النيلفون، أوبياكل العروسة أو الدمية؟)	.٣
Z	نعم	هل يحب طفلك النسلق على الأشياء؟(مثلا ، الأثاث أو السلالم؟)	٤.
¥	نعم	هل يسوي طفلك حركات غريبه بأصابعه قدام عيونه؟ (مثلا ، هل يتأمل طفلك أصابعه قرب عيونه؟)	.0
ß	نعم	هل يأشر طفلك بإصبع واحد ليطلب حاجه أوعلشان تساعده ؟(مثلا ،يأشر لطعام أو للعبة ما يقدر يوصلها ؟)	<u>.</u> ٦

		هل يأشر طفلك بإصبع واحد عشان يراويك حاجه تعجبه ؟(مثلا ، يأشر على طائرة في السماء أو شاحنة كبيرة في الشارع؟)	٠,٧
¥	نعم	app and	Ŋ
Å	نعم	هل يهتم طفلك بالاطفال الآخرين؟ (مثلا ، هل يشوف طفلك على الاطفال الآخرين، يبتسم لهم، أو يروح لهم؟)	.^
¥	نعم	هل يراويك طفلك الحاجات اللي يحبها أو يجيبها حالك علشان تشوفها, ما علشان تساعده ولكن لمجرد المشاركة؟ (مثلا ، يراويك مجله أو دمية، أوشاحنة ؟)	٩
¥	نعم	هل يرد طفلك عندما تناديه بإسمه؟ (مثلا ، هل يشوف عليك، هل يتكلم أو يتوقف عن الشي اللي يسويه لما تناديه بإسمه؟	.1.
ß	نعم	عندما تبتسم لطفلك، هل يردلك الإبتسامة ؟	. 11
¥	نعم	هل ينز عج طفلك من الضوضاء اليومية؟ (مثلا ، هل يصرخ طفلك أويصيح لوجود از عاج مثل صوت المكنسة أو الخلاط؟)	.17
¥	نعم	هل يمشي طفاك؟	١٣
¥	نعم	هل يشوف / ينظر طفلك عليك يوم تكلمه أو تلعب معه، أو تغيير ملابسه؟	.1 ٤
Ä	نعم	هل يحاول طفلك أن يقلد اللي تسويه؟(مثلا ، يلوح باي باي أو مع السلامة، يصفق، أو يصلي مثلك؟)	.10

¥	نعم	١٦. إذا لفيت رأسك علشان تشوف شي، هل يلتفت طفلك عليه ويشوف الشي اللي شفته انت؟	
¥	نعم	 ١٧. هل يحاول طفلك أن يلفت انتباهك؟ (مثلا ، هل يشوف عليك لتمدحه ، أو يقول " شوف أو " شو فني "؟) 	
Ä	نعم	. ١٨ . هل يفهم طفلك عليك يوم تقول له يسوي شئ ؟ (بدون ما تأشر مثلا, هل يقدر طفلك أن يفهم" حط الكتاب على الكرسي "أو" جيب لي شرشف/ بطانية "؟	
ž	نعم	19. إذا صار شئ جديد، هل يشوف طفلك عليك علشان يشوف ردّة فعلك ؟ (مثلا ، إذا سمع صوت غريب أومضحك، أو شاف لعبة جديدة هل يشوف عليك ؟ عليك ؟	
¥	نعم	٢٠. هل يحب طفلك الأنشطة الحركية؟ (مثلا ، أن تأرجحه أو الهز على ركبتك؟)	

الدرجة الكلية:

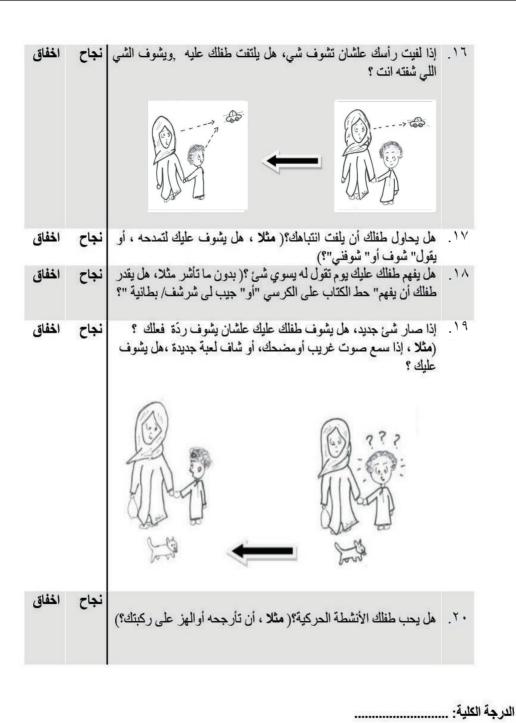
Anexx2: (M-CHAT-R/F)

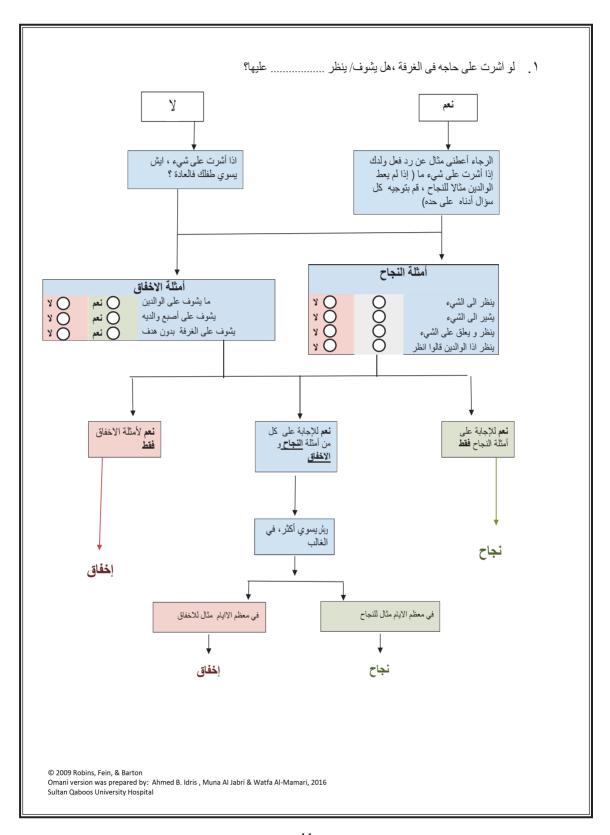
المتابعة التكميلية)صفحة تسجيل النقاط M-CHAT-R Follow-Up (M-CHAT-R/F)

يرجى ملاحظة أن نعم/لا تم إستبالها بـ نجاح/اخفاق

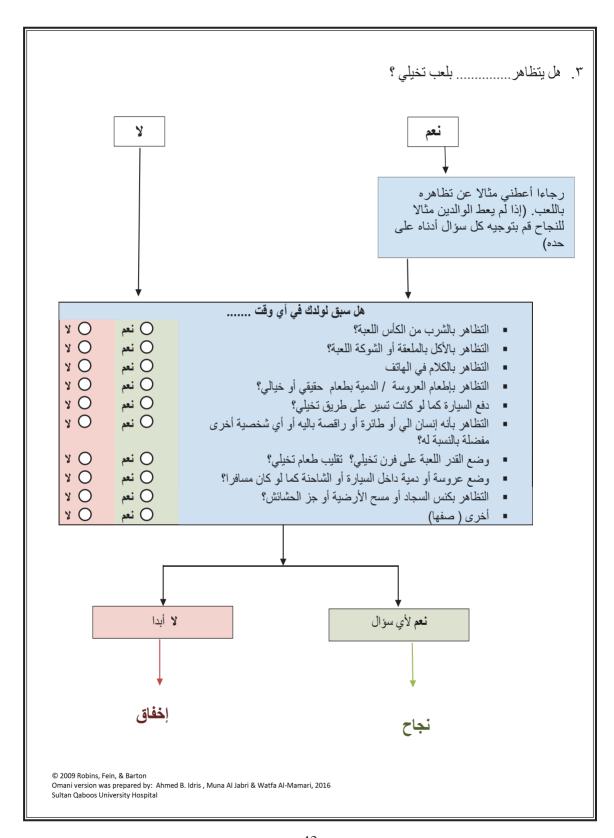
اخفاق اخفاق	نجاح نجاح	البند لو أشرت على حاجه فى الغرفة ، هل يشوف/ ينظر طفاك عليها؟ (مثلا : إذا أشرت له إلى لعبة أو حيوان _، هل يشوف طفاك على اللعبة أو الحيوان؟)	الرقم ١.
اخفاق	نجاح	هل حسبت/شككت في يوم أن طفلك (ما يسمع) أصم؟	۲.
اخفاق	نجاح	هل يلعب طفلك لعبا تخيليا ؟ (مثلا، يشرب من كوب فاضي، يتكلم في النيلفون، أوبياكل العروسة أو الدمية؟)	۳.
اخفاق	نجاح	هل يحب طفلك التسلق على الأشياء؟(مثلا ، الأثاث أو السلالم؟)	٤.
اخفاق	نجاح	هل يسوي طفلك حركات غريبه بأصابعه قدام عيونه؟(مثلا ، هل يتأمل طفلك أصابعه قرب عيونه؟)	۰.٥
اخفاق	نجاح	هل يأشر طفلك بإصبع واحد ليطلب حاجه أوعلشان تساعده ؟(مثلا ،يأشر لطعام أو للعبة ما يقدر يوصلها ؟)	<u>.</u> ٦

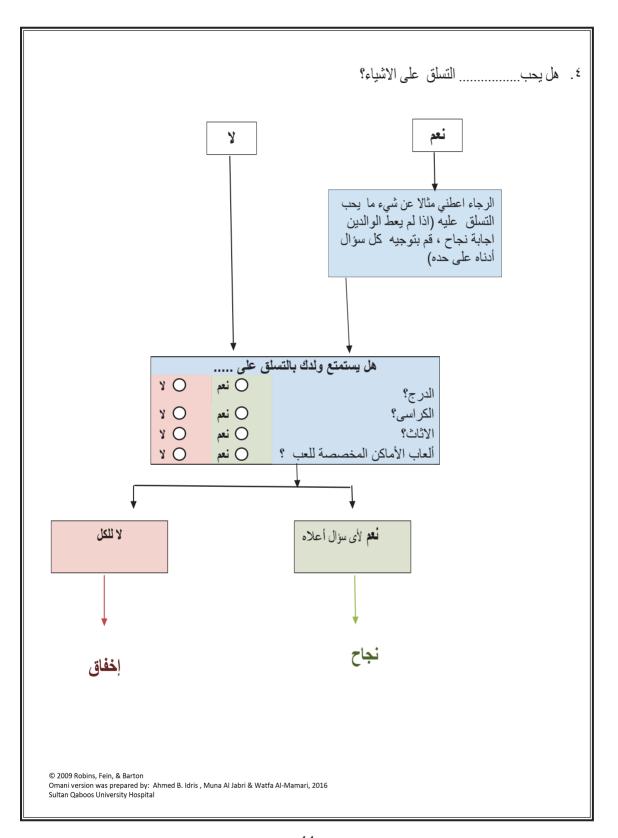
		هل يأشر طفلك بإصبع واحد عشان يراويك حاجه تعجبه ؟(مثلا ، يأشر على طائرة في السماء أو شاحنة كبيرة في الشارع؟)	. ٧
اخفاق	نجاح		<i>Y</i>
اخفاق	نجاح	هل يهتم طفلك بالاطفال الأخرين؟(مثلا ، هل يشوف طفلك على الاطفال الآخرين، يبتسم لهم، أو يروح لهم؟)	٠.٨
اخفاق	نجاح	هل يراويك طفلك الحاجات اللي يحبها أو يجيبها حالك علشان تشوفها ، ما علشان تساعده ولكن لمجرد المشاركة؟ (مثلا ، يراويك مجله أو دمية، أوشاحنة ؟)	٩.
اخفاق	نجاح	هل يرد طفلك عندما تناديه بإسمه؟(مثلا ، هل يشوف عليك، هل يتكلم أو يتوقف عن الشي اللي يسويه لما تناديه بإسمه؟	.1.
اخفاق	نجاح	عندما تبتسم لطفاك، هل يردلك الإبتسامة ؟	.11
اخفاق	نجاح	هل ينز عج طفلك من الضوضاء اليومية؟(مثلا ، هل يصرخ طفلك أويصيح لوجود از عاج مثل صوت المكنسة أوالخلاط؟)	.17
اخفاق	نجاح	هل يمشي طفاك؟	١٣
اخفاق	نجاح	هل يشوف / ينظر طفاك عايك يوم تكلمه أو تلعب معه، أو تغيير ملابسه؟	
اخفاق	نجاح	هل يحاول طفلك أن يقلد اللي تسويه؟(مثلا ، يلوح باي باي أو مع السلامة، يصفق، أو يصلي مثلك؟)	.10

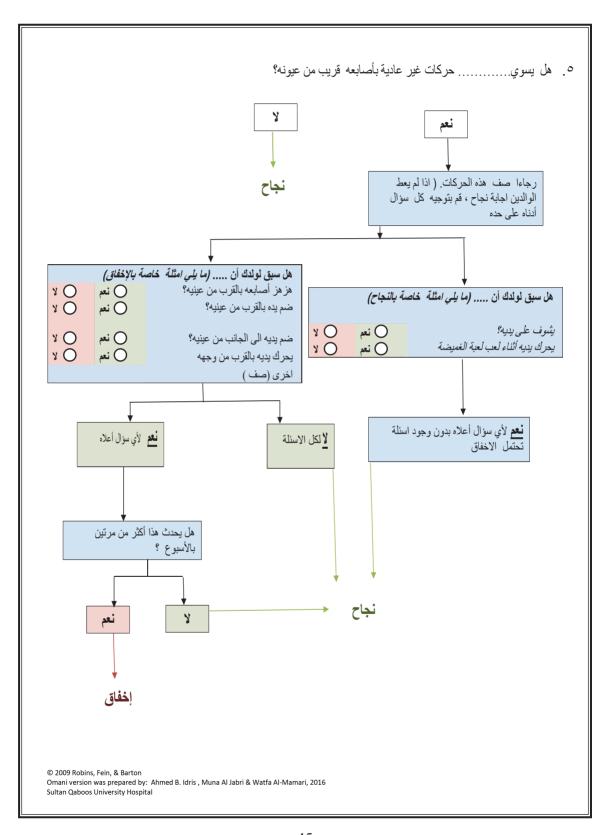


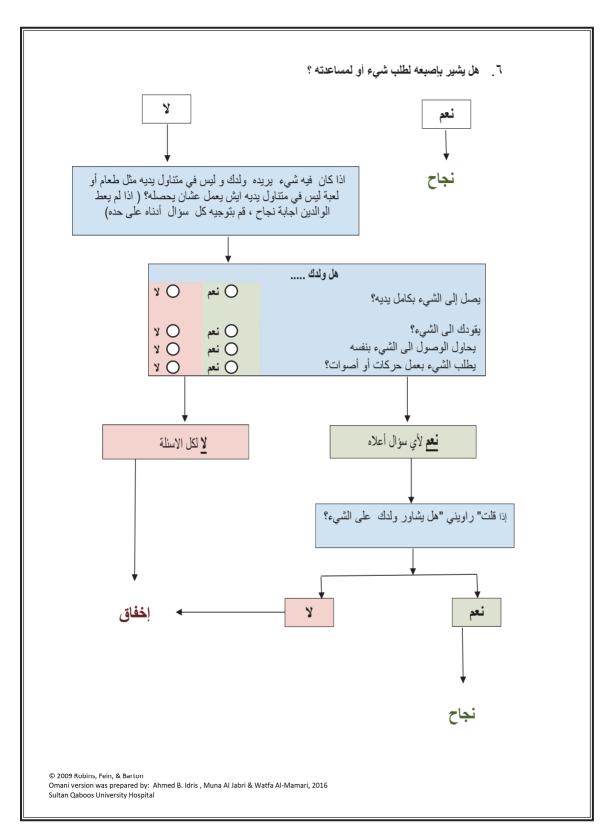


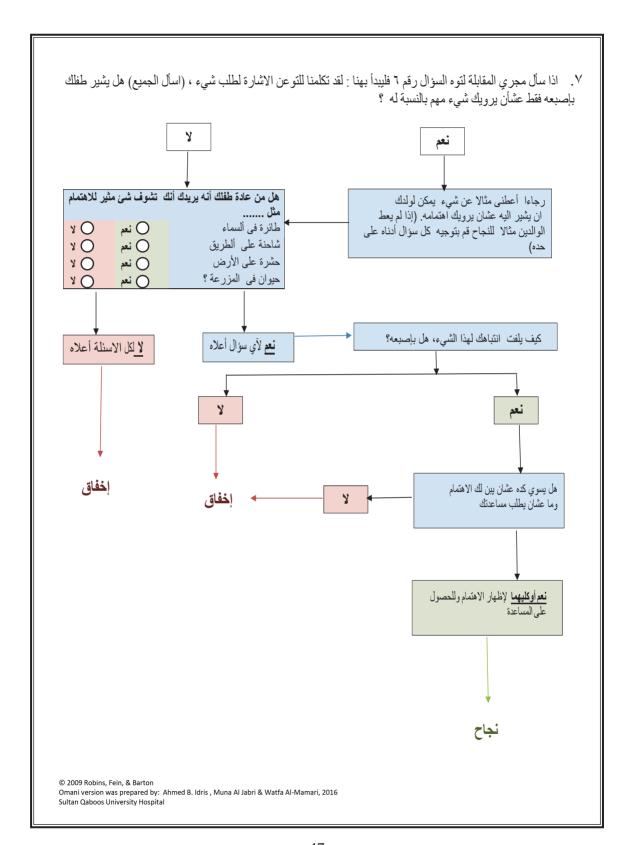
٢. هل حسيت/شككت في يوم أن طفلك (ما يسمع) أصم؟ ايش خلاك تفكر كذه؟ هل ولدك/ بنتك ... O نعم O لا O نعم O لا في الغالب ما يعطى اهتمام للأصوات في الغالب ما يعطي اهتمام للناس؟ نعم لأي واحد من لا لكليهما السؤالين إخفاق هل سويت فحص سمع لولدك؟ أيضا قم بالسؤال عن كل نعم الاطفال ايش كانت نتيجة فحص السمع (اختر اجابة واحدة) السمع طبيعي 0 السمع أقل من الطبيعي 0 النتائج ما اكيدة

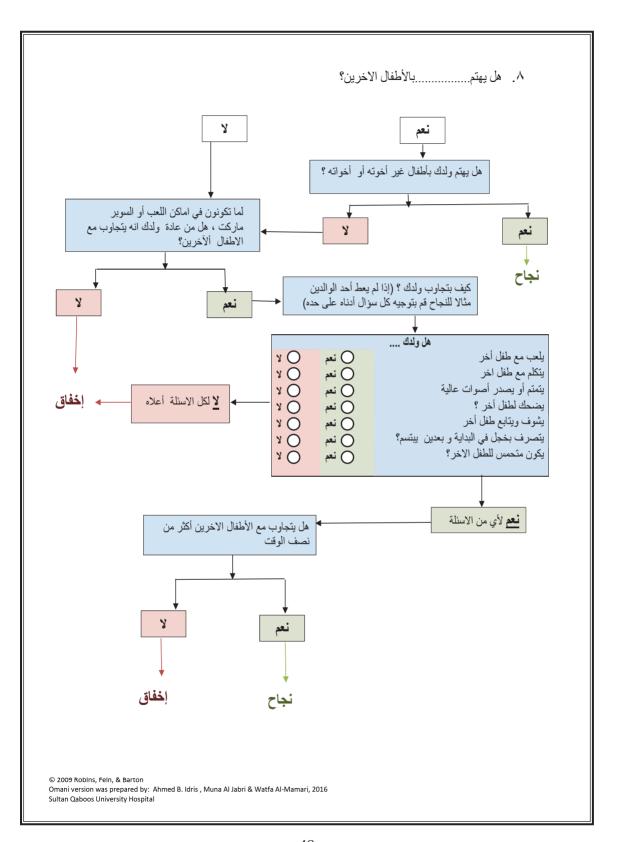


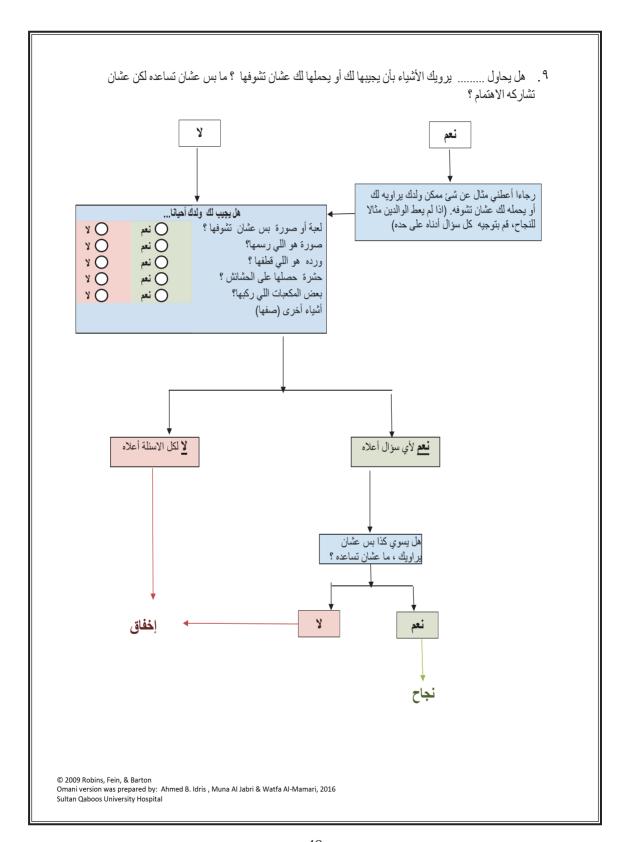


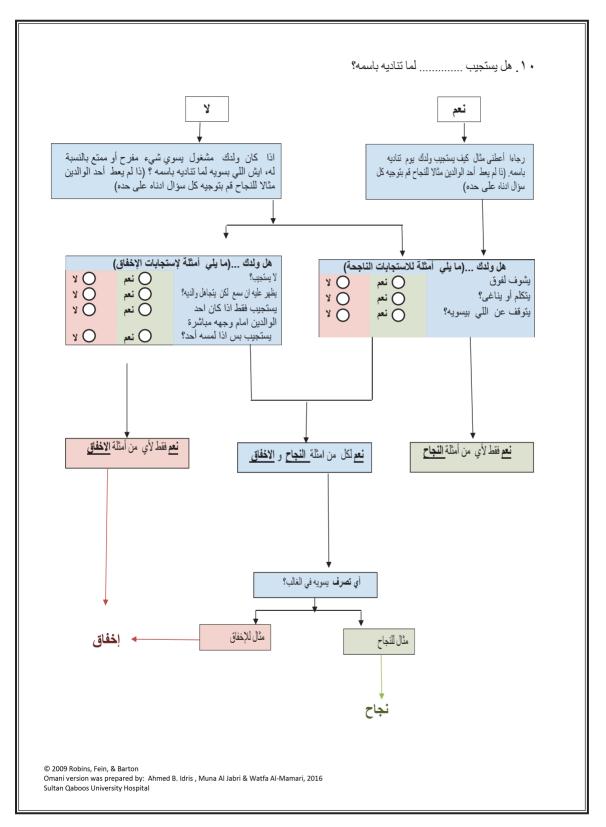


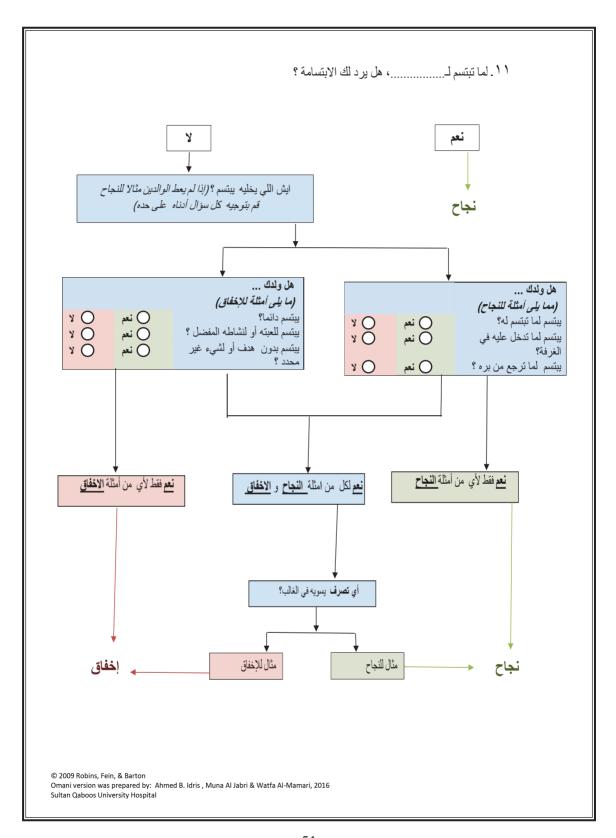


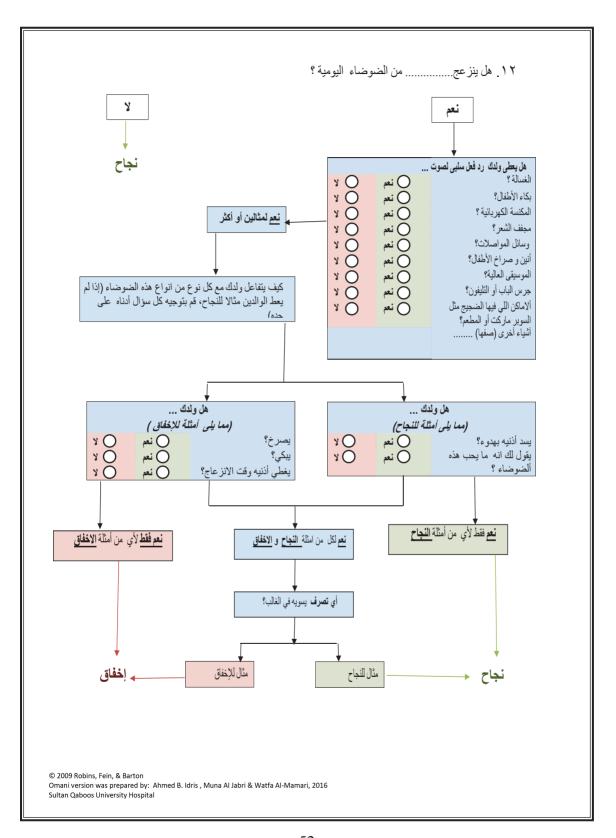


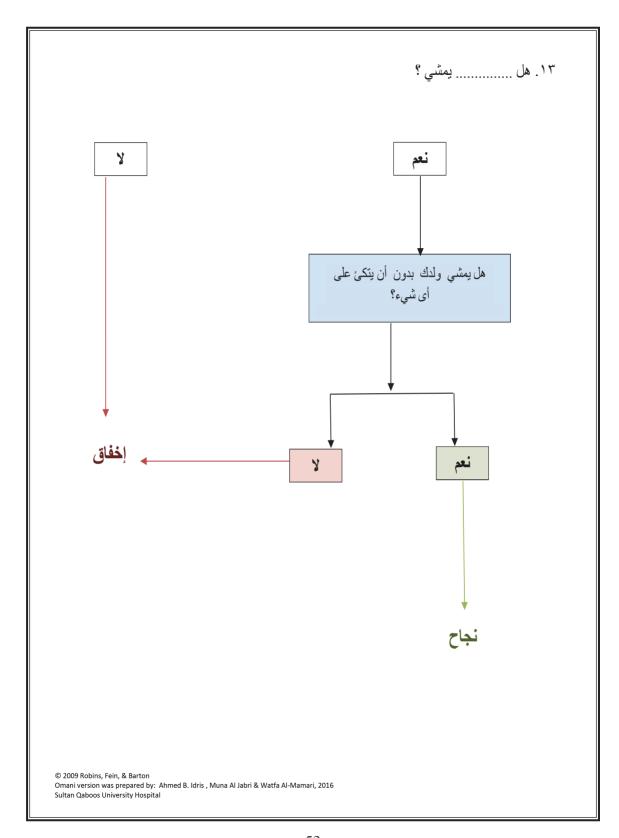


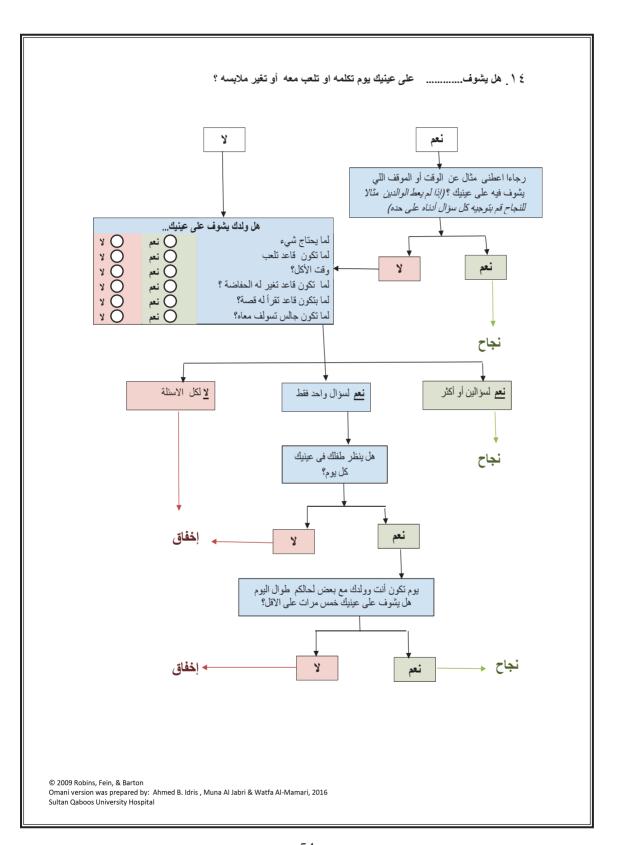


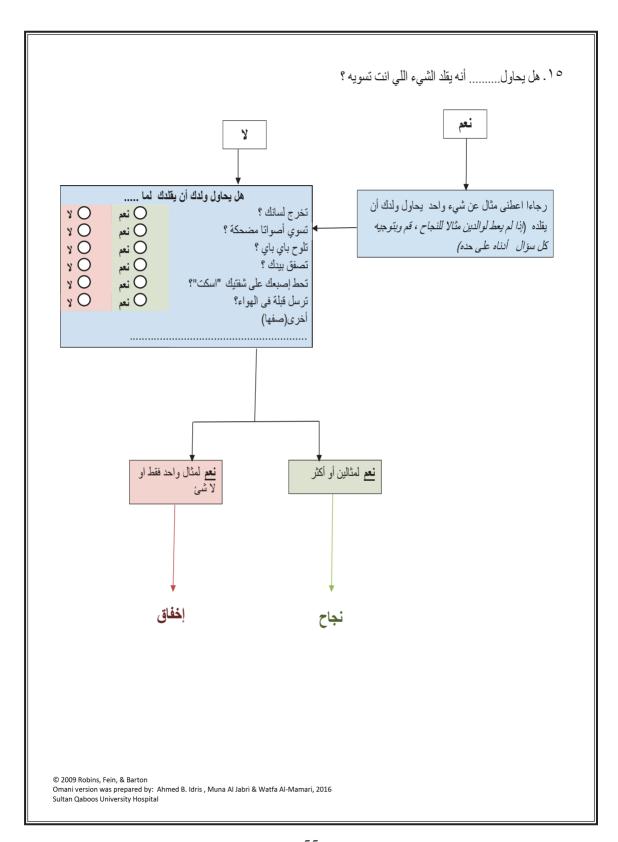


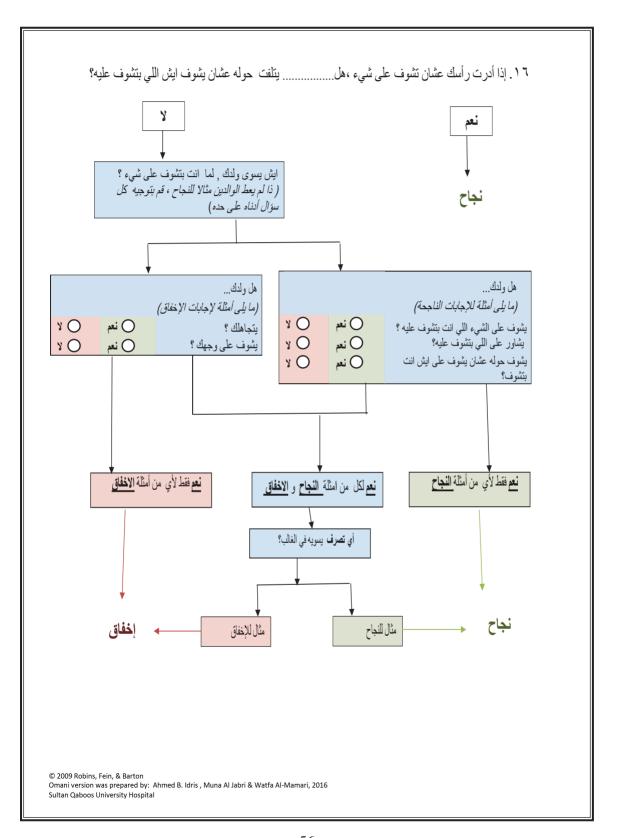


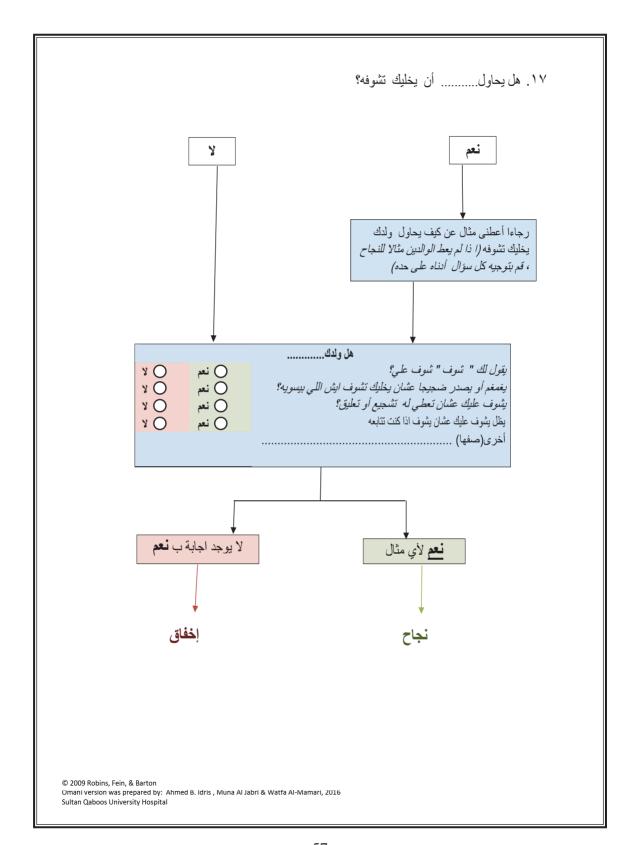


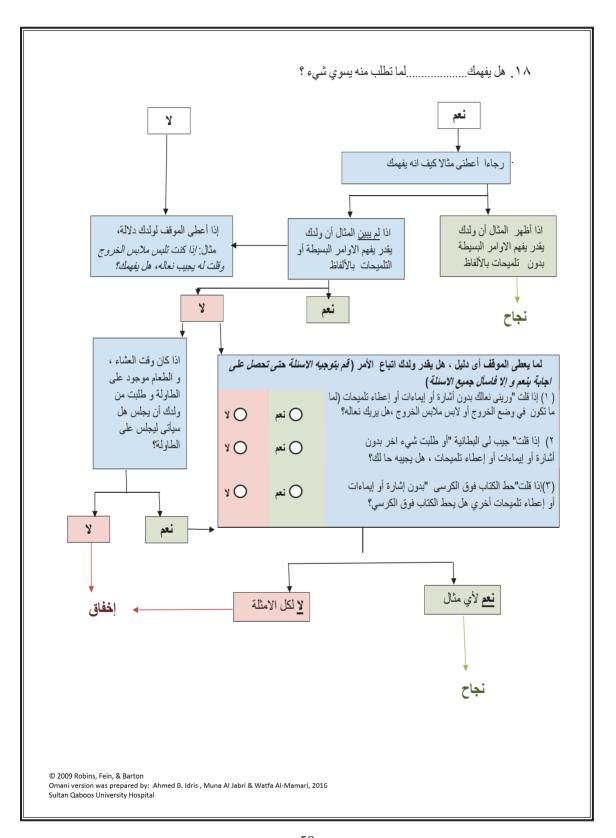


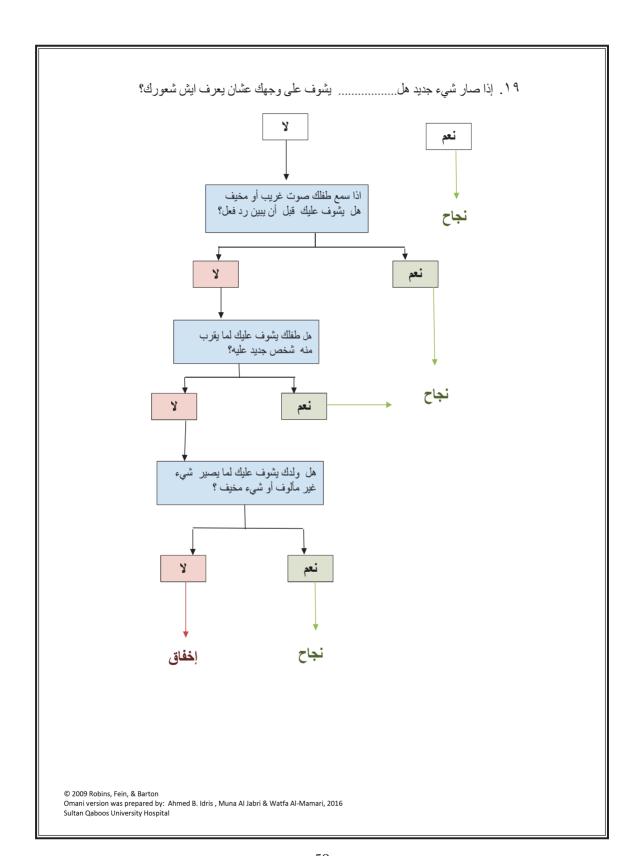


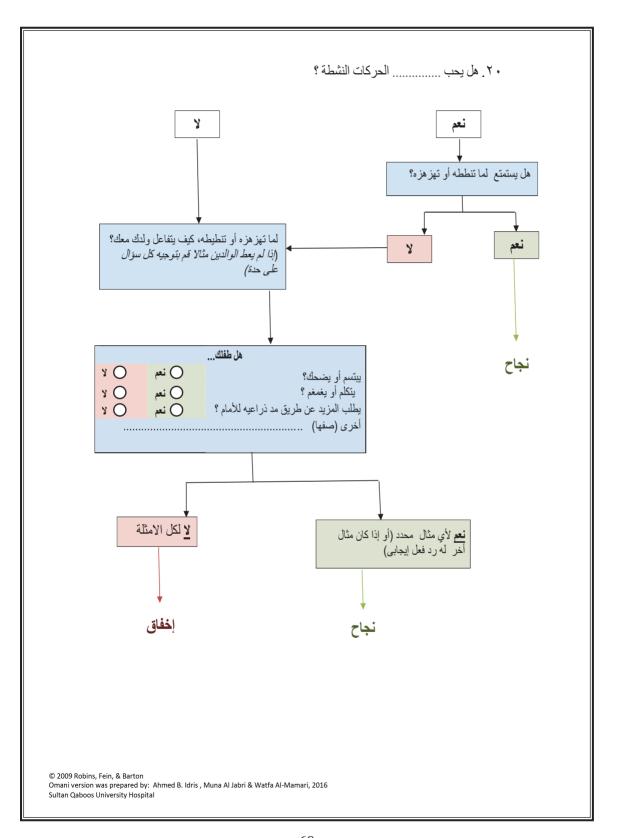












Annex 3: Distribution list of health facilities per each diagnostic center.

Governorates	Wialyat	Spe	ecialized diagnostic cent	ers
		SQUH	Royal H	AL-Masarra H
Muscat	AL-Seeb	1- Seeb HC 2- Shadi HC 3- Mawaleh HC 4- Al Khod HC 5- Mabela HC 6- S Mabela HC 7- Al Hail HC 8- N. Mawaleh HC 9- Seeb Polyclinic		
	Boushar		 Azaiba HC Ghobra HC Ansab HC North Al Khuwair Al Khuwair Boushar Polyclinic 	
	Matrah		1. Muttrah HC 2. Ruwi HC 3. Wattaya HC 4. Wadi Kabir HC 5. Hay AlMina HC	
	Muscat		1. Muscat HC 2. Yeti HC 3. Seefa HC	
	Ameerat			1- Amerat HC 2- Al nadha HC 3- Al Hajar HC
	Qrayat			1. Quriat Hospital 2. Qryat Polyclinic 3. Bama HC 4. Mazara HC 5. Wadi Arbeen 6. Siya HC

N.Shriqya	Ibra	1- Ibra HC 2- Ibra Polyclinic		
	Midhaibi	1. Samad Hospital 2. Midhaibi HC 3. Wadi Endam HC 4. Al Ayoun HC 5. Al Jizza HC 6. Al Afalaj HC 7. Sinaw. Hospital		
	Bidiya	1. Bidya HC 2. Bidya Polyclinic		
	Dima Wa Tayeen	1. Wadi Tayeen HC 2. Ismaiyah HC 3. Dima HC 4. Miss HC		
	Wadi Bani Khalid	Wadi Bani Khalid HC		
	Al Qabil	1. Al Qabil HC 2. W Naam HC		
S Shaqiya	Masirah		1. Masirah.Hospital	
	Sur			1. Sur HC 2. Al Ayja HC 3. Tiwi HC 4. Ras Al Hadd HC 5. Wadi Bani Jaber HC 6. Wadi Al Minqul HC 7. Sur Polyclinic
	Al Kamil			1. Al Kamil HC 2. Wafi HC 3. Tahwa HC 4. Sayq & Sabt HC
	Jaalan Bani Bu Ali			1. Jaalan Bani Bu Ali Hosp. 2. Ar Ruways HC 3. Al Ashkharah HC 4. As Siwayh HC

				5. Asilah HC 6. Khuwaymah HC 7. Jaalan Bani Ali Polyclinic
	Jaalan Bani Bu Hasan			1. Jaalan B Bu Hassan Hosp. 2. Al Ghaynah HC 3. Falaj HC 4. Al Mashayikh HC
Dofar	Salalah		1. Hejayf HC 2. Qayun Hayriti 3. Titam HC 4. As Saadah HC 5. Awqad HC 6. Al Jadidah HC 7. Al Dahareez HC 8. Al Gharbiah HC	
	Sadah		1. Sadah Hospital 2. Hasik HC 3. Hadbin HC 4. Soab HC	
	Dalkut		1. Dalkut HC 2. Khadrafi HC	
	Shalim Wa Juzur Hallaniyat		1. Shalim HC 2. Al Halolaniyat HC 3. Al Shuwaymiyah HC 4. Sharbthat HC 5. Dimit HC 6. Kubut HC	
	Taqah	1. Madinat Al Haqq.HC 2. Taqah HC 3. JIbjat HC		
	Rakhyut	1. Rakhyut Hosp 2. Shahb Asayb		
	Al Mazyunah	1. Al Mazyunah HC 2. Mitan HC 3. Harwib HC 4. Jajwal HC 5. Andat HC 6. Tosnat HC		

i				
	Mirbat			1. Tawi Ataya Hospital 2. Mirbat.Hospital
	Thumrayt			1. Thumrayt HC 2. Mudayy HC 3. bethnah HC 4. Dhahbun HC 5. Al Hashman HC
	Muqshin			1. Muqshin
Dhahiyra	Ibri	1. Ibri Polyclinic 2. Tanam HC 3. Hijarmat HC 4. Maqniyat HC 5. Al Mamur HC 6. Wadi Al Ayn HC 7. Kahnat HC 8. Bilad Ash Shuhum HC 9. Hamra Ad Duru HC 10. Al Ainin HC 11. Al Akhder HC		
	Yanqul	1. Yanqul.Hospital 2. Yanqul HC 3. Al Wuqbah HC		
	Dank	1. Dank HC 2. Wadi Fida HC 3. Qumayra HC		
S.Bathina	Rustaq		 Wadi Bani Ghafir Hosp. Wadi Al Haymli Hosp. Al Hoqain HC Wadi As Sahtan HC Al Razi HC Wadi Bani Auf HC Rustaq Rustaq HC Rustaq HC 	

	Al Awabi		1. Wadi Bani Kharus Hospital 2. Al Awabi HC	
	Nakhal		1. Wadi Mistal HC 2. Nakhal HC 3.Al Abyad HC	
	Wadi Al		1. Wadi Al Maawil	
	Maawil Barka		HC	
	Багка		1. Barka Polyclinic 2. Barka HC 3. As Sawadi HC 4. Naseem HC	
	Musannah		1. Musannah Polyclinic 2. Musannah HC 3. Wudam HC	
N.Bathina	Sohar	1. Wadi Hibi.Hosp. 2. Wadi Ahin HC 3. Al Multaqa HC 4. Al Uwinat Alfalaj HC 5. Sohar Polyclinic 6. Al Tarif HC		
	Shinas	1. Shinas Polyclinic 2. Abu baqrah HC		
	Liwa	1. Liwa HC 2. Nabr HC 3. Rahab HC		
	Saham	 Saham. Hospital Wadi Bani Umar HC Saham Polyclinic Hafit HC Al Ghuwaisah HC 		
	Al Khaburah	1.Wadi Al Sarami Hosp. 2.Wadi Al Hawasinah Hosp. 3.Khaburah Polyclinic 4.Wadi Shafan HC 5.Qasabiya HC		

Musandum	Suwaiq Khasab Dibba Bukha	1. Mishayiq HC 2. Suwaiq Polyclinic 3. Wadi Al Jahawir HC 4. Bidiya HC 5. Khadra HC 6. Shereesa HC 7. Al Thamrad HC 1. Lima HC 2. Kumzar HC 3. Khasab Polyclinic 1. Dibba. Hospital 1. Bukha. Hospital		
	Madha	1. Madha		
AL-Wasta	Mahoot	1. Madila	1. Mahoot HC 2. Khaluf HC 3. Sarab HC 4. Najdah HC	
	Hyma		1. Al Ajaiz HC	
	Duqum		1. Duqum Hospital 2. Wadi Haitam HC 3. Rasmadrika HC	
	Al Jazir		1. Al Jazir Hospital 2. Al Liqbi HC 3. Rima (Gobra North)HC 4. Ghobra South HC	
Dakhliya	Nizwa			1. Jabal Akhdar Hospital 2. Birkat Al Mawz HC 3. Nizwa Polyclinic 4.Tanuf HC 5.Firq HC
	Bahla			1. Bahla Hospital 2. Bahla Polyclinic
	Al Ghafat			1. Bisya HC 2. Jabal Al Kaur HC 3. Uwayfiyah HC 4. Mamur HC

	Manah			1. Manah HC
	Al Hamra			1. Al Hamra HC
	Adam			1- Adam Hospital 2- Al Zahia HC 3- Al Ghabah HC
	Izki			1- Izki.Hospital 2- Izki Polyclinic 3- Al Qaryatayn HC 4- Buldan Al Awamir HC 5- Sayma & maqazzah HC
	Sumail			1- Sumail Hospital 2- Sumail Poyclinic 3- Wadi Bani Rawahah HC 4- Wadi Mahram HC 5- Lizugh HC 6- Somra HC
	Bidbid			1- Fanja HC 2- Bidbid HC
	Burimi		Wadi Jizzi Hospital Al Fayyad HC Hafit HC Buraimi Polyclinic	
	Mahadah		1. Mahadah HC 2. Roudah HC 3. Wadi Al Hyool HC	
	Sunainah		1. Sunainah HC	
Grand Total		93	76	68

Annex 4: Figure 2: Management Algorithm Early screening of Autism Spectrum Disorder in children Complete (M-CHAT/R) questionnaire Parent - Caregiver Immunization Clinic Review the questionnaire and calculate the overall result **EPI - Nurse** Score 8-20 Score 0-2 Low risk Medium risk High risk Physician in Health institution:-If child is younger than Open visit for the child. 24 months, screen again Refer the case (urgently) to after second birthday. No further action Specialized Pediatrician in centers: Fax #: required unless Polyclinic/Wilayate SQUH: (24144389) Hospital surveillance indicates Royal Hospital (24211419) risk for ASD. AL-Masarra Hospital (24873800) Document result in child health record Refer child to ENT doctor for hearing (Score is 0-1) assessment Child has screened Negative. No further action required unless surveillance indicates risk for ASD. Refer child to receive Child should be rescreened at future rehabilitation care well-child visits. support in social development center (Form A) Diagnostic (Score is ≥ 2) Assessment Child has screened Positive. Refer child to receive rehabilitation care in social development centers (Form B)

Annex 5: Form A

سلطنة عمان وزارة الصحة المديرية العامة للرعاية الصحية الأولية

التاريخ:

الموافق:

إستمارة التحويل (أ) إلى من يهمه الأمسر

الاسم:

رقم الملف الطبي:

نود الإفادة بأن الطفل/الطفلة المذكور أعلاه متابع من قبلنا في المؤسسة الصحية----------------وقد تبين بإستخدام الفحص المبدئي أن نتيجة فحص الطفل إيجايبة باستخدام :

نتيجة M-CHAT/R/(score) نتيجة

نتيجة M-CHAT-R/F(score) =-----

لذا فإن هذا الطفل/الطفلة بحاجة لرعاية وتأهيل خاص لتطوير مهار اته/مهار اتها وذلك بأحد المراكز التأهيلية المتخصصة للأطفال علما بأنه قد تم تحويل الطفل/الطفلة لمستشفى ------------لإجراء الفحوصات التشخيصية بالعيادة التخصصية .

لذا نأمل التكرم بتقديم خدمات الرعاية التأهيلية المساندة حسب المتبع لديكم, وسيتم موافاتكم بالنتائج لأحقا.

شاكرين لكم تعاونكم مع الطفل وأسرته.

Annex 6: Rehabilitation centers

ا. المراكز الخاصة

الملحق ٤ : مراكز التأهيل

4	مركز درة الشرق التغصصي للتوحد	الباطئة جنوب	الرستاق	عيسى	90990.09	هبة هبة	Dauc2016@gmail.com
4	مركز الأوائل الدولي للإعاقة العقلية والسمعية فقط	ظفار	صلالة	محمود	44414041		Alawael.center20@gmail.com
٦.	المركز العربي للتوحد	مسقط	مدينة الاعلام		99411091		wijdan@arabautismcenter.com
٩	مركز جعلان للتوحد	الشرقية شمال	جعلان بن <i>ي</i> بوعلي		99220.77		Almasroori30@hotmail.com
>	الملاذ للتأهيل جميع الإعاقات ماعدا التوحد والإعاقة الحركية	مسقط	المعييلة	صبرة	9541.751	, , , , o, t	
1	تواصل للتوحد	الداخلية	نزوى	راشد	97099010		Alasmi66@hotmail.com
2	الأفق للتوحد	مسقط	الخوض	محمد	971790.9		Horizon.autism@gmail.com
10	ظفار للتوحد	ظفار	صلالة	علي	ዓ ሦ ለ ሦ ደ ነ ግ ግ		Alizaareer1972@yahoo.com
1 6	الجودة للتوحد	ظفار	صلالة	علاء	94744440		<u>Autism.q.c@hotmail.com</u>
14	الخليج للتأهيل جميع الاعاقات ما عدا التوحد	مسقط	الوطية	زهير	99777491		Int.rehab.canter@gmail.com
1 1	المناير للتوحد	مسقط	الموالح	سميرة	99559577		Al-manayer-mac@hotmail.com
11	الأجيال المشرقة للتوحد	الباطنة شمال	صحم				
1.	الأجيال المشرقة للتوحد	الباطنة شمال	صحار	عبدالله	97 67 9000		<u>ajialsohar@gmail.com</u>
م	الأيادي البيضاء للتقنيات المساعدة والتأهيل جميع الاعاقات بما فيهم التوحد	مسقط	الموالح	عانشة	99595710		fsgdcoman@gmail.com
>	نيراس الأثير للتوحد	الباطنة شمال	صحم	مريم	90447073	9777109	Nebras-ather@outlook.sa
<	التدخل المبكر للأطفال ذوي الإعاقة جميع الاعاقات بما فيهم التوحد	مسقط	العنيبة		99444994		
-5	المتكامل للتوحد	مسقط	الخوير	ھم	90976777	904514	maymibrahim@gmail.com
0	التخصصي للتوحد	مسقط	بوشر	أحلام	99777017		<u>autismmct@gmail.com</u>
**	همس الأثير جميع الاعاقات بما فيهم التوحد	مسقط	الخوض ٢	شنتال	9444.449		abichebelchantal@yahoo.com
-1	رواء للتأهيل جميع الاعاقات بما فيهم التوحد	مسقط	الخوض	زيانة	9711100		rawarehabititaioncenter@gmail.com
4	الابتكار للتأهيل جميع الاعاقات بما فيهم التوحد	مسقط	العنيبة	بشرى	904. 1456	900. 71	Ccr.oman2@gmail.com
_	مسقط للتوحد	مسقط	العذيبة	مشاعر	11035015		<u>info@mac-me.om</u>
7	المح العرائر	المحافظة	الولاية / الحي	اسم المشرف	رقم الهاتف	هاتف ۲	اليوري الإسمالية
	· · · · · · · · · · · · · · · · · · ·	العنو	العنوان		رقم الهاتف		The Holder of

٦. المراكز الحكومية

مركل التقييم والتأهيل المهنى	مسقط	رو م	الحادث	22411400	Omani100hope@gmail.com
دار الأمان – وحدة الأمان	مسقط	الخوض	نورة البوسعيدية	99/414/4	
دار الأمان – وحدة الوفاء	مسقط	الخوض	نورة البوسعيدية	99/11//	
دباء	مسندم	÷	مريم الشحية	2241444	Someone2222@hotmail.com
خصب	مسندم	خصب	مريم الشحية	241777	Someone 2222@hotmail.com
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ختم المستشفى

سلطنة عمان وزارة الصحة المديرية العامة للرعاية الصحية الأولية

التاريخ:

الموافق:

إستمارة التحويل (ب)

<u>إلى من يهمه الأمسر</u>

الاسم:

رقم الملف الطبي:

إسم الطبيب الإختصاصي

التوقيع -----

نود الإفادة بأن الطفل/الطفلة المذكور أعلاه متابع من قبلنا في مستشفى
بعيادة
وتم تشخيصه ب
شاكرين لكم تعاونكم مع الطفل وأسرته .

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