National Orthopaedic Physical Therapy Outcomes Database

Orthopaedic Section
Shoulder Pain Pilot Project

Introductory Webinar
September 22, 2015

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Chair, NOPTOD Task Force

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NOPTOD Task Force

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Orthopaedic Section Strategic Plan

Strategic Outcome 1 – Standards of Practice:

<u>Objective B</u> – Develop National Orthopaedic Physical Therapy Outcomes Database

National Orthopaedic Physical Therapy Outcomes Database

Purposes:

- **Provide clinicians with a tool they can use to assess their clinical performance**
- **Describe orthopaedic physical therapy practice**
- **Provide evidence of the value of orthopaedic physical therapy**

National Orthopaedic Physical Therapy Outcomes Database

The NOPTOD is
NOT
a Research Project

National Orthopaedic Physical Therapy Outcomes Database

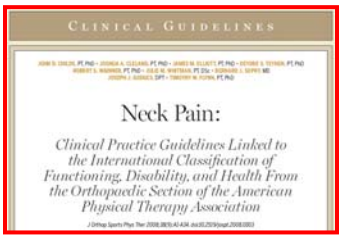
Quality Improvement Projects:

- **Assess clinician and organizational performance**
- **Permitted use of protected health information**
- **Does not require IRB approval**

National Orthopaedic Physical Therapy Outcomes Database

Neck Pain Pilot Project:

- **Collect & analyze clinical & process outcomes data based on Neck Pain Clinical Practice Guidelines**
- **Successfully Completed (n= 250 patients)**
- **(n= 40 therapists)**



National Orthopaedic Physical Therapy Outcomes Database

Purposes of Shoulder Pilot Project:

- Demonstrate feasibility of collecting and analyzing outcomes data
- Determine usefulness of information to enhance clinician performance & establish value of orthopaedic physical therapy
- Use results to plan for an electronic data capture & analysis system for the NOPTOD

NOPTOD Shoulder Pain Pilot Project

Overview:

Participation in Pilot Project is Voluntary & Open to All PT Members of Orthopaedic Section

NOPTOD Shoulder Pain Pilot Project

Registration Process:

- **Complete Registration Form:**
  - Name
  - E-mail address
  - Practice setting
  - Organization
  - Facility
  - Entry level degree
  - Years of practice
  - Advanced degrees (including DPT if entry level degree was not DPT)
  - Residencies/Fellowships
  - ABPTS certifications

NOPTOD Shoulder Pain Pilot Project

Registration Process:

- Completed registration form submitted to Section Office
- Section Office will assign organization/facility & PT ID numbers
- Individualized Case Report Forms, including the organization/facility & PT ID numbers will be provided by Section Office
- Only use Case Report Forms that contain your personal ID information to submit information to the NOPTOD
- Data Use Agreement between clinical site and section
  - Complete and return prior to submission of any data

NOPTOD Shoulder Pain Pilot Project

Overview:

- Data collection: paper-based forms
- Data to be collected includes:
  - Patient characteristics
  - Symptoms & physical examination findings
  - Treatment classification
  - Interventions
  - Clinical outcomes
  - Information summarizing episode of care

NOPTOD Shoulder Pain Pilot Project

Overview:

- Data collected prospectively for 6 months:
  - Oct 2015 through March 2016
- Record data during course of care
- Retrospective chart review of patients treated prior to data collection period not eligible for inclusion in pilot project

NOPTOD Shoulder Pain Pilot Project

Overview:

- Completed forms to be sent to Orthopaedic Section Office
  - Scanned & e-mailed
  - Faxed
  - US postal service
- Forms should be sent soon after the end of care, but will also accept forms monthly or at end of data collection period
- Data will be input by graduate students

NOPTOD Shoulder Pain Pilot Project

Overview:

- **Analysis & summary of information:**
  - Completeness of data collection
  - Accuracy of treatment classification
  - Adherence to evidence-based treatment guidelines
  - Summary of clinical outcomes
  - Summary of episode of care (duration, visits)

NOPTOD Shoulder Pain Pilot Project

Overview:

- Results sent to all section members contributing data
- Summary of personal results
- Summary of overall results to permit comparisons with peers across country
- All results reported anonymously

NOPTOD Shoulder Pain Pilot Project

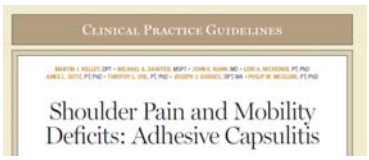
Two Key Documents

- Manual of Operating Procedures (MOP)
  - Reference document describing project and details of standardized methods for data collection
- Case Report Form
  - Data Collection Form
    - Intake Data (pg 1 and 2)
    - Weekly Reporting (pg 3)

NOPTOD Shoulder Pain Pilot Project

Manual of Operating Procedures(MOP):

- Developed by team of researchers and clinicians, based on:
  - Shoulder Pain Clinical Practice Guidelines (JOSPT May 2013)
  - STAR Shoulder Classification (PTJ May 2015)



JOSPT May 2013

- Philip McClure, PT, PhD, FAPTA (Chair)
- Gerard Brennan, PT, PhD
- James Irrgang, PT, PhD, ATC, FAPTA
- Brian Leggin, PT, DPT, OCS
- Lori Michener, PT, PhD, ATC, SCS, FAPTA
- Amee Seitz, PT, PhD
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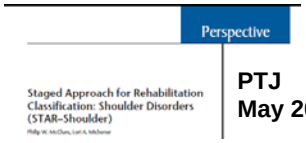


PTJ May 2015

NOPTOD Shoulder Pain Pilot Project

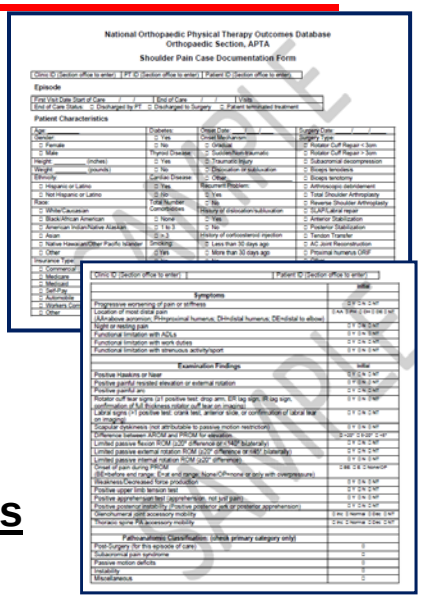
Manual of Operating Procedures(MOPs):

- **Reference document providing detailed description of project:**
  - Overview & purpose of project
  - Instructions for registration to participate in pilot project
  - Instructions for completing & submitting Case Report Forms
  - Standardized methods for:
    - Assessment of symptoms
    - Examination procedures
    - Classification of patient
    - Reporting intervention strategies
    - Assessment of outcomes

NOPTOD Shoulder Pain Pilot Project

Case Report Form:

- Intake (pg 1-2)
  - Identification information
  - Episode
  - Patient characteristics
  - Symptoms
  - Examination findings
  - Classification
- Weekly Reporting (pg 3)
  - Daily/weekly
  - Interventions
  - Outcomes


National Orthopaedic Physical Therapy Outcomes Database
Orthopaedic Section, APTA
Shoulder Pain Case Documentation Form

No Patient Identifiers

Case Report Form

Identification Information:

- Section Office will provide 10 forms
  - Clinic, PT & Patient ID numbers
- Start with form number 001 and use consecutively numbered form for each new patient
- Do not include any patient identification information (name, SSN, MRN) on form
- Use only forms that have your ID information
- Contact Orthopaedic Section Office if additional forms are needed

National Orthopaedic Physical Therapy Outcomes Database
Orthopaedic Section, APTA

Shoulder Pain Case Documentation Form

Clinic ID (Section office to enter)	PT ID (Section office to enter)	Patient ID (Section office to enter)

Episode

First Visit Date Start of Care / /	End of Care / /	Visits
End of Care Status: ☐ Discharged by PT ☐ Discharged to Surgery ☐ Patient terminated treatment		

Patient Characteristics

Age: _____	Diabetes:	Onset Date: / /	Surgery Date: / /
Gender:	☐ Yes	Onset Mechanism:	Surgery Type:
☐ Female	☐ No	☐ Gradual	☐ Rotator Cuff Repair < 3cm
☐ Male	Thyroid Disease:	☐ Sudden/Non-traumatic	☐ Rotator Cuff Repair > 3cm
Height: _____ (inches)	☐ Yes	☐ Traumatic Injury	☐ Subacromial decompression
Weight: _____ (pounds)	☐ No	☐ Dislocation or subluxation	☐ Biceps tenodesis
Ethnicity:	Cardiac Disease:	☐ Other _____	☐ Biceps tenotomy
☐ Hispanic or Latino	☐ Yes	Recurrent Problem:	☐ Arthroscopic debridement
☐ Not Hispanic or Latino	☐ No	☐ Yes	☐ Total Shoulder Arthroplasty
Race:	Total Number Comorbidities	☐ No	☐ Reverse Shoulder Arthroplasty
☐ White/Caucasian		History of dislocation/subluxation	☐ SLAP/Labral repair
☐ Black/African American	☐ None	☐ Yes	☐ Anterior Stabilization
☐ American Indian/Native Alaskan	☐ 1 to 3	☐ No	☐ Posterior Stabilization
☐ Asian	☐ > 3	History of corticosteroid injection	☐ Tendon Transfer
☐ Native Hawaiian/Other Pacific Islander	Smoking:	☐ Less than 30 days ago	☐ AC Joint Reconstruction
☐ Other	☐ Yes	☐ More than 30 days ago	☐ Proximal humerus ORIF
Insurance Type:	☐ No	☐ No	☐ Other _____
☐ Commercial	Narcotics Use:	Surgery:	
☐ Medicare	☐ Yes	☐ Yes	
☐ Medicaid	☐ No	☐ No	
☐ Self-Pay	NSAID Use:		
☐ Automobile	☐ Yes		
☐ Workers Compensation	☐ No		
☐ Other			

SAMPLE

Page 1

Case Report Form:Pg 1

Intake

Episode of Care:

- Dates for start and end of care:
  - Use mm/dd/yyyy format
- Total number of visits during episode
- End of care status:
  - Discharged by PT
  - Discharged to Surgery
  - Patient terminated treatment

Case Report Form Pg 1

Patient Characteristics:

- Age
- Gender
- Height (inches)
- Weight (pounds)
- Ethnicity & race (as described by US Census Bureau)
- Insurance type
- Diabetes
- Thyroid Disease
- Cardiac disease
- Total number of morbidities
  - See list in MOP
- Smoking
- Narcotic use
- NSAID use

Case Report Form Pg 1

Patient Characteristics:

Onset Date:

- Enter exact date if known
- If only month is known, enter the 1st day of the month – ex. injury in March 2011 – enter 03/01/2011
- If only year is known, enter 1st day of the year – ex. injury in 2008, enter 01/01/2008

- Onset mechanism:
  - Gradual
  - Sudden
  - Traumatic
  - Dislocation/ Subluxation
- Recurrent problem
- Hx of corticosteroid inject (< 30d, > 30d)
- Surgery
- Date of surgery
- Surgery type

Clinic ID (Section office to enter) | Patient ID (Section office to enter)

	Initial
Symptoms	
Progressive worsening of pain or stiffness	☐Y ☐N ☐NT
Location of most distal pain (AA=above acromion; PH=proximal humerus; DH=distal humerus; DE=distal to elbow)	☐AA ☐PH ☐DH ☐DE ☐NT
Night or resting pain	☐Y ☐N ☐NT
Functional limitation with ADLs	☐Y ☐N ☐NT
Functional limitation with work duties	☐Y ☐N ☐NT
Functional limitation with strenuous activity/sport	☐Y ☐N ☐NT
Examination Findings	**Initial**
Positive Hawkins or Neer	☐Y ☐N ☐NT
Positive painful resisted elevation or external rotation	☐Y ☐N ☐NT
Positive painful arc	☐Y ☐N ☐NT
Rotator cuff tear signs (≥1 positive test: drop arm, ER lag sign, IR lag sign, confirmation of full thickness rotator cuff tear on imaging)	☐Y ☐N ☐NT
Labral signs (>1 positive test: crank test, anterior slide, or confirmation of labral tear on imaging)	☐Y ☐N ☐NT
Scapular dyskinesis (not attributable to passive motion restriction)	☐Y ☐N ☐NT
Difference between AROM and PROM for elevation	☐>20° ☐5-20° ☐<5°
Limited passive flexion ROM (≥20° difference or <140° bilaterally)	☐Y ☐N ☐NT
Limited passive external rotation ROM (≥20° difference or <45° bilaterally)	☐Y ☐N ☐NT
Limited passive internal rotation ROM (≥20° difference)	☐Y ☐N ☐NT
Onset of pain during PROM (BE=before end range; E=at end range; None/OP=none or only with overpressure)	☐BE ☐E ☐None/OP
Weakness/Decreased force production	☐Y ☐N ☐NT
Positive upper limb tension test	☐Y ☐N ☐NT
Positive apprehension test (apprehension, not just pain)	☐Y ☐N ☐NT
Positive posterior instability (Positive posterior jerk or posterior apprehension)	☐Y ☐N ☐NT
Glenohumeral joint accessory mobility	☐Inc ☐Normal ☐Dec ☐NT
Thoracic spine PA accessory mobility	☐Inc ☐Normal ☐Dec ☐NT
Pathoanatomic Classification: (check primary category only)	
Post-Surgery (for this episode of care)	☐
Subacromial pain syndrome	☐
Passive motion deficits	☐
Instability	☐
Miscellaneous	☐

SAMPLE

Page 2

Case Report Form: Pg 2

- **Symptoms**
  - Progressive worsening of pain or stiffness
  - Location of most distal pain
    - (AA=above acromion; PH=proximal humerus; DH=distal humerus; DE=distal to elbow)
  - Night or resting pain
  - Functional limitation with ADLs
  - Functional limitation with work duties
  - Functional limitation with strenuous activity/sport
- Record each as either:
  - Present (Y)
  - Not Present (N)
  - Not tested (NT

Case Report Form: Pg 2

- **Examination** (most are recorded as either: Y N NT)
  - Positive Hawkins or Neer
  - Positive painful resisted elevation or external rotation
  - Positive painful arc
  - Rotator cuff tear signs (at least 1 positive test: drop arm, ER lag sign, IR lag sign, confirmation of full thickness rotator cuff tear on imaging)
  - Labral signs (at least 1 positive test: crank test, anterior slide, or confirmation of labral tear on imaging)
  - Scapular dyskinesis (not attributable to passive motion restriction)
  - Difference between AROM and PROM for elevation
    - >20° 5-20° <5°
  - Limited passive flexion ROM (≥20° difference or <140° bilaterally)
  - Limited passive external rotation ROM (≥20° difference or <45° bilaterally)
  - Limited passive internal rotation ROM (≥20° difference)
  - Onset of pain during PROM
    - (BE=before end range; E=at end range; None/OP=none or only with overpressure)
  - Weakness/Decreased force production
  - Positive upper limb tension test
  - Positive apprehension test (apprehension, not just pain)
  - Positive posterior instability (Positive posterior jerk or posterior apprehension)
  - Glenohumeral joint accessory mobility (Inc Normal Dec NT)
  - Thoracic spine PA accessory mobility (Inc Normal Dec NT)

Case Report Form: Pg 2

- Pathoanatomic Classification (This should remain static over episode of care, only record initially)
  - Post-Surgery (for this episode of care)
  - Subacromial pain syndrome
  - Passive motion deficits
  - Instability
  - Miscellaneous

Case Report Form: Pg 3

Weekly Reporting

- Enter date for start of each week of treatment at the top of each column
- Check box in column if patient was not seen during that week – may be due to:
  - Patient was not scheduled during week
  - Patient has been discharged or
  - Patient has terminated treatment on his/her own

Case Report Form: Pg 3

- Irritability Classification (High-Mod-Low)
  - This is may change over an episode of care, record weekly

Stage of Irritability		
High	**Moderate**	**Low**
High pain (≥7/10) Consistent night or rest pain Pain before end of ROM AROM<PROM High disability	Moderate pain (4–6/10) Intermittent night or rest pain Pain at end of ROM AROM~PROM Moderate disability	Low pain (≤3/10) Absent night or rest pain Minimal pain with overpressure AROM=PROM Low disability

Case Report Form : Pg 3

- Patient Adherence to Instructions (Y N NT)
- Interventions (record number of times provided each week, MAX 1 PER VISIT)
  - Shoulder: Joint Mobilization – Non-end range
  - Shoulder: Joint Mobilization – End range
  - Spinal Mobilization (Non-thrust)
  - Spinal Manipulation (Thrust)
  - Manual Soft Tissue Mobilization
  - Instrumented Soft Tissue Mobilization
  - Dry Needling
  - ROM Exercises (non-end range)
  - ROM Exercises (end range)
  - ROM/Stretching Exercises (overpressure/long duration)
  - Neuromuscular Control/Coordination Training
  - Resistive Strength Training Exercises (including isometric)
  - Taping/Strapping
  - Patient Education/Activity Modification
  - Therapeutic Ultrasound
  - Electrical agents (e-stim, light, laser)

Note delineations related to intensity

So, <u>for example</u>, if you did resistive exercise on two visits within week 2, you would put a "2" in that cell (1 for each day). Regardless of how many individual exercises the patient did each visit. Obviously, more than 1 intervention type may occur each visit so if you also did end-range joint mobilization on both visits, you would mark as below

Clinic ID (Section office to enter) | PT ID (Section office to enter) | Patient ID (Section office to enter)

Weekly Reporting

Date: (mm/dd/yyyy)							
Not Scheduled/Discharged/Terminated Treatment:		☐	☐	☐	☐	☐	☐
	Initial	**Wk 2**	**Wk 3**	**Wk 4**	**Wk 5**	**Wk 6**	**DC**
Irritability Classification: (check primary category only) (H = High, M = Moderate, L = Low)	H M L	H M L	H M L	H M L	H M L	H M L	H M L
Patient demonstrates adherence to instructions	Y N NT	Y N NT	Y N NT	Y N NT	Y N NT	Y N NT	Y N NT
INTERVENTIONS (record number of times provided each week, MAX 1 PER VISIT)	**Initial Wk**	**Wk 2**	**Wk 3**	**Wk 4**	**Wk 5**	**Wk 6**	**DC**
Shoulder: Joint Mobilization – Non-end range							
Shoulder: Joint Mobilization – End range		2					
Spinal Mobilization (Non-thrust)							
Spinal Manipulation (Thrust)							
Manual Soft Tissue Mobilization							
Instrumented Soft Tissue Mobilization							
Dry Needling							
ROM Exercises (non-end range)							
ROM Exercises (end range)							
ROM/Stretching Exercises (overpressure/long duration)							
Neuromuscular Control/Coordination Training							
Resistive Strength Training Exercises (including isometric)		2					
Taping/Strapping							
Patient Education/Activity Modification							
Therapeutic Ultrasound							
Electrical agents (e-stim, light, laser)							
OUTCOMES	**Initial**	**Wk 2**	**Wk 3**	**Wk 4**	**Wk 5**	**Wk 6**	**DC**
Penn Shoulder Score (0 to 100, 0 worst)							
Pain with normal activities (eating, dressing, bathing)? (0-10, 10 worst)							

DRAFT

Case Report Form

Interventions:

- Record number of times each intervention was provided during each week of treatment
- "Initial" treatment should include all interventions provided in 1st week of treatment
- Interventions recorded for subsequent weeks should include number of times the intervention was provided that week
- If patient was seen beyond 6 weeks, record the total number of times the intervention was provided beyond 6 weeks in the column labeled "DC" (discharge**)**

Case Report Form Pg 3

- Outcomes (record weekly)
  - Penn Shoulder Score (0 to 100, 0 worst)
    - Sum total of Pain (30 pts), Satisfaction (10 pts), Function (60 pts)
  - Pain with normal activities ? (eating, dressing, bathing)
    - (0-10, 10 worst)

National Orthopaedic Physical Therapy Outcomes Database

The NOPTOD is a Quality Improvement Project

NOT

a Research Project

IRB Approval Is Not Necessary

National Orthopaedic Physical Therapy Outcomes Database

Questions???

Clinic ID (Section office to enter)	PT ID (Section office to enter)	Patient ID (Section office to enter)

Weekly Reporting

Date: (mm/dd/yyyy)							
Not Scheduled/Discharged/Terminated Treatment:		☐	☐	☐	☐	☐	☐
	Initial	**Wk 2**	**Wk 3**	**Wk 4**	**Wk 5**	**Wk 6**	**DC**
Irritability Classification: (check primary category only) (H = High, M = Moderate, L = Low)	H M L	H M L	H M L	H M L	H M L	H M L	H M L
Patient demonstrates adherence to instructions	Y N NT	Y N NT	Y N NT	Y N NT	Y N NT	Y N NT	Y N NT
INTERVENTIONS (record number of times provided each week, MAX 1 PER VISIT)	**Initial Wk**	**Wk 2**	**Wk 3**	**Wk 4**	**Wk 5**	**Wk 6**	**DC**
Shoulder: Joint Mobilization – Non-end range							
Shoulder: Joint Mobilization – End range							
Spinal Mobilization (Non-thrust)							
Spinal Manipulation (Thrust)							
Manual Soft Tissue Mobilization							
Instrumented Soft Tissue Mobilization							
Dry Needling							
ROM Exercises (non-end range)							
ROM Exercises (end range)							
ROM/Stretching Exercises (overpressure/long duration)							
Neuromuscular Control/Coordination Training							
Resistive Strength Training Exercises (including isometric)							
Taping/Strapping							
Patient Education/Activity Modification							
Therapeutic Ultrasound							
Electrical agents (e-stim, light, laser)							
OUTCOMES	**Initial**	**Wk 2**	**Wk 3**	**Wk 4**	**Wk 5**	**Wk 6**	**DC**
Penn Shoulder Score (0 to 100, 0 worst)							
Pain with normal activities (eating, dressing, bathing)? (0-10, 10 worst)							

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The Penn Shoulder Score, Part 1: Pain and Satisfaction Subscales

Please circle the number closest to your level of pain or satisfaction	Official Use Only
Pain at rest with your arm by your side: 0 1 2 3 4 5 6 7 8 9 10 No Pain … Worst pain possible	____ (10 - # circled)
Pain with normal activities (eating, dressing, bathing) 0 1 2 3 4 5 6 7 8 9 10 No pain … Worst pain possible	____ (10 - # circled) Score 0 if not Applicable
Pain with strenuous activities (reaching, lifting, pushing, pulling) 0 1 2 3 4 5 6 7 8 9 10 No pain … Worst pain possible	____ (10 - # circled) Score 0 if not Applicable
Pain Score	= ___ / 30
How satisfied are you with the current level of function of your shoulder? 0 1 2 3 4 5 6 7 8 9 10 No pain … Worst pain possible	____ (10 - # circled)

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Penn Shoulder Score: Function Subscale

Please circle the number that best describes the level of difficulty you might have performing each activity

	No difficulty	Some difficulty	Much difficulty	Can't do at all	Did not do before injury
1. Reach the small of your back to tuck your shirt in with your hand	3	2	1	0	X
2. Wash the middle of your back/neck bra	3	2	1	0	X
3. Perform necessary toileting activites	3	2	1	0	X
4. Wash the back of opposite shoulder	3	2	1	0	X
5. Comb hair	3	2	1	0	X
6. Place hand behind head with elbow held straight out to the side	3	2	1	0	X
7. Dress self (including put on coat and pull shirt off overhead)	3	2	1	0	X
8. Sleep on affected side	3	2	1	0	X
9. Open a door with affected arm	3	2	1	0	X
10. Carry a bag of groceries with affected arm	3	2	1	0	X
11. Carry a briefcase/ suitcase with affected arm	3	2	1	0	X
12. Place a soup can (1-2 lb) on a shelf at shoulder level w/o bending elbow	3	2	1	0	X
13. Place a one gallon container (8-10 lb) on a shelf at shoulder level w/o bending elbow	3	2	1	0	X
14. Reach a shelf above your head w/o bending your elbow	3	2	1	0	X
15. Place a soup can (1-2 lb) on a counter overhead w/o bending your elbow	3	2	1	0	X
16. Place a one gallon container (8-10 lb) on a shelf overhead w/o bending elbow	3	2	1	0	X
17. Perform a usual sports hobby	3	2	1	0	X
18. Perform household chores (cleaning, laundry, cooking)	3	2	1	0	X
19. Throw overhand/swim/overhead raquet sports. (circle all that apply to you)	3	2	1	0	X
20. Work full-time at your regular job	3	2	1	0	X
Scoring					
Total of colums = _____ (a)					
Number of Xs x 3 =_____ (b), 60- ____(b) = _____(c) (if no Xs are circled, function score = total # of columns)					
Function Score = (_____ + _____) = _____ x 60 = (a) (c)	**Function Score =** /60				

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