

ERGONOMICS WEBINAR



ERGONOMICS IN THE IRISH WORKPLACE: RISK ASSESSMENT TO MANAGE RISK EXPOSURE

The Health and Safety Authority (H.S.A) invites you to attend our "Ergonomics in the Irish workplace: Risk Assessment to manage Risk Exposure" webinar.

Why attend?

Attendees will be given an overview of current H.S.A. Ergonomic Risk management strategies and interventions and they will be given an overview of the H.S.A. online course "Introduction to Ergonomics risk Assessment" which advocates a systematic step by step methodology to assess ergonomic risk using evidence based risk assessment tools.

The webinar will include case studies demonstrating the application of practical approaches to risk assessment and problem solving through worker consultation and will detail the tangible benefits arising from the interventions by way of reduced risk of musculoskeletal injury or ill health, improved human performance and productivity.

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Date & Time:

November 6th 2024, 11:00-12:00



REGISTER HERE

Who should attend?

The workshop will be of a particular interest to:

- Health and Safety Professionals
- Production and Operations Managers
- Safety Representatives
- Occupational Health Professionals
- Production or Manufacturing Engineers
- Others that have an interest in the science and management of work

Programme

11:00: Current Health and Safety Authority Ergonomic risk management Strategies and Interventions, Frank Power - Senior Ergonomist (Inspector), Health and Safety Authority

11:25: Introduction to hsalearning.ie Ergonomic Resources, Alex Shortt, Enterprise and Employee Support

11:50: Q&A

12:00: Close of Webinar



hsalearning.ie
HSA Online Courses

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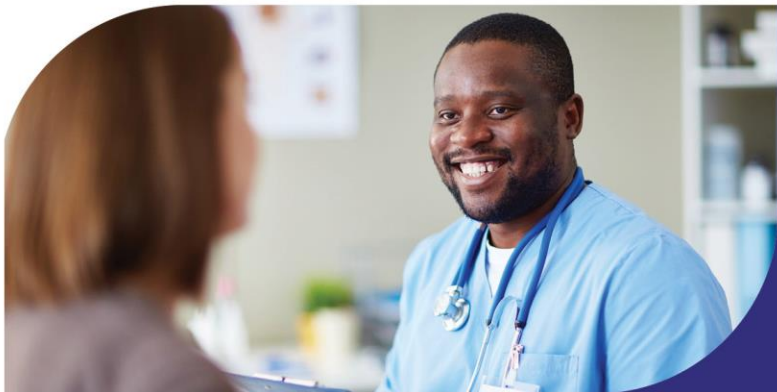
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Current Health and Safety Authority Ergonomic risk management Strategies and Interventions



Frank Power, Senior Ergonomist (Inspector),
Health and Safety Authority, Ireland

November 6th 2024

Managing Ergonomic Risk to improve Musculoskeletal Health

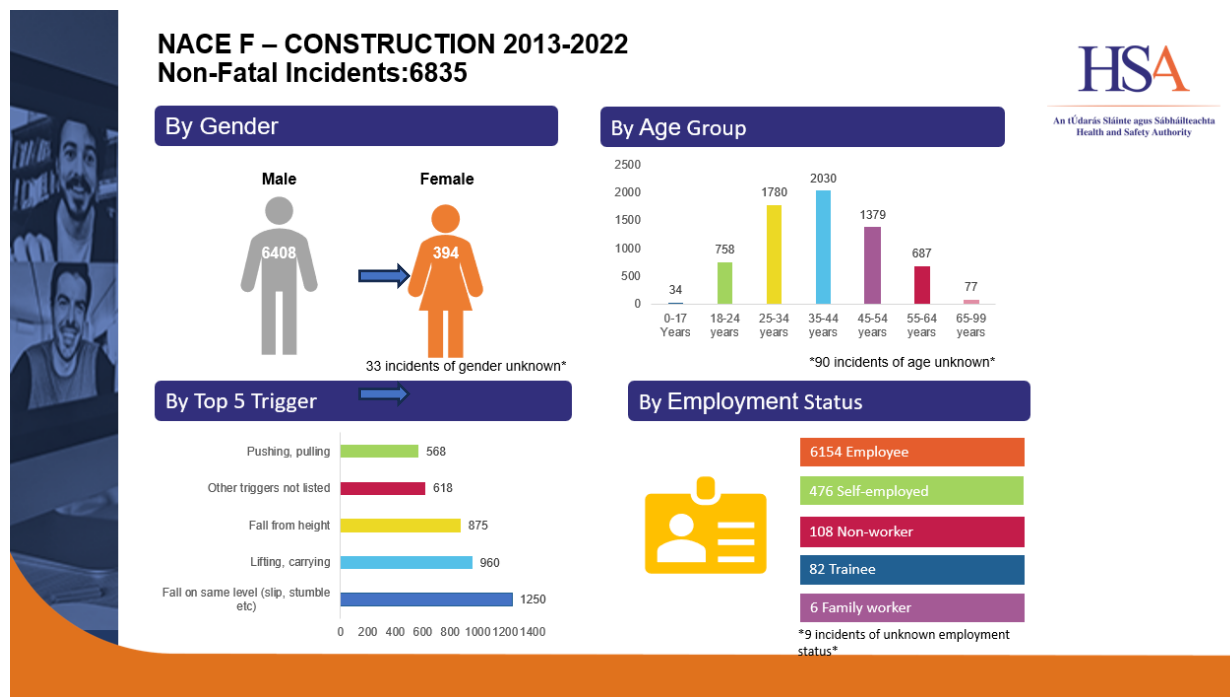


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- Musculoskeletal Injury Statistics
- Legal context
- Example of Interventions to address manual handling risk exposure in construction
- Musculoskeletal Injury Statistics: Health and social Care Sector
- Example of Interventions to address manual handling risk exposure in health and social care sector
- Relevant Resources

Musculoskeletal Injury Statistics Construction

35% of all Injuries reported to the H.S.A. in the Construction sector (2013-2022) resulted in musculoskeletal injury due to exposure to manual handling risk factors



Musculoskeletal Injury Statistics



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- The **risk of occupational ill-health** is greater in the agriculture, **construction**, transport and health sectors
- High level of under-reporting of injuries to the Health and Safety Authority among the self-employed.
- The nature of musculoskeletal injury is that the damage is cumulative over time due to ongoing exposure to risk factors including excessive force, repetition, sustained awkward posture

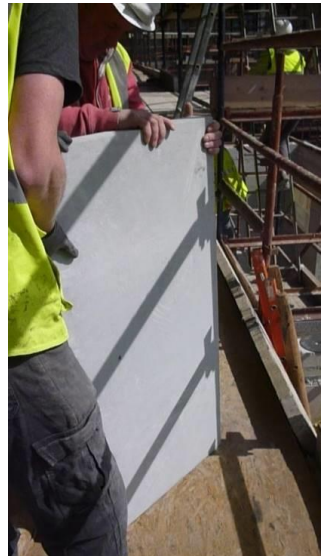
Reference: Work-related Musculoskeletal Disorders, and Stress, Anxiety and Depression in Ireland: Evidence from the QNHS 2002–2013

The Legal context

- The 2005 Safety, Health and Welfare at Work Act and the Hierarchy of Controls
- The Manual Handling of Loads Regulation 2007
- The Construction Regulations 2013
- The Display Screen Equipment Regulations 2007

Inspector Intervention to address very high risk manual handling work activity: Construction

- Sub-contractor workers were lifting large stone cladding units without a mechanical aid. Some of the limestone units were smaller but a full strip of a larger stone slabs weighing >60 kg
- Very High risk exposure to physical ergonomic risks including excessive force and sustained awkward postures
- This work activity results in sustained large compressive forces on the trunk and sustained awkward posture which puts those workers at risk of injury.
- Inspector issued a Prohibition Notice to cease the manual installation of the stone cladding



- Met with the PSCS and sub-contractors, went through issues, no planning taking place regarding load installation should have system at design stage built into the construction project for using aids to install. Risk Assessment Method Statement being developed, two mechanical aids to be used, rail on parapet, ROI left on site.
- PSCS in writing that the original plan was for over 1,000 individual stone cladding units to be installed manually on the site and the range of unit weight was between 20-60kg.
- This manual installation of cladding ceased once the PN was issued
- New system of installation of cladding on site using an Abaco vacuum lift system and a commitment to incorporate the use of the Risk assessment tools for future projects.



Manual Handling Work Activities Construction

Key Risk Exposures (Reference to HSE UK MAC Tool)

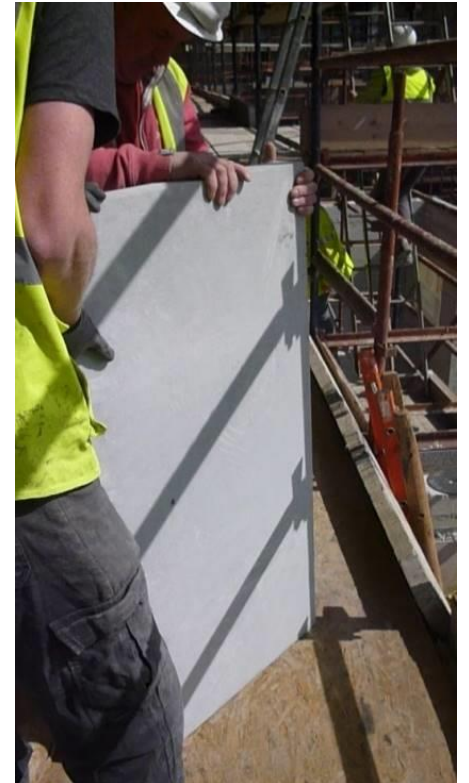
Load Weight/frequency : P Very high level of risk

Hand distance from the lower back(Arms angled away from the body) R High level of risk

Vertical Lift Region: Hands at floor level: R High level of risk

Grip on load: R High level of risk

“The nature of musculoskeletal injury is that the damage is cumulative over time due to ongoing exposure to risk factors including excessive force, repetition, sustained awkward posture”



Key Information Inspectors will look for: Construction Ergonomics

Load weight Data

Evidence of manual handling risk assessments with appropriate data and detail collected to quantify risk

Method Statement for work activity with evidence of measures put in place to mitigate risk (e.g. step by step instruction on installation with use of mechanical aids)

Key Questions for PSCS/Sub Contractors

- Have they identified the range of loads that will be installed on site (e.g. cladding, glazing, fire doors, plasterboard, etc)
- Have they requested that sub-contractors to provide a risk assessment of load installation on site where they may be potential manual handling risk exposure (e.g. excessive large load weight, awkward postures, etc)
- Have sub-contractors access to the load weight data?
- Can they demonstrate that manual handling risk exposure has been addressed?
- Do they know the planned system of work for installation?
- Has consideration been given to using appropriate mechanical means to install loads?

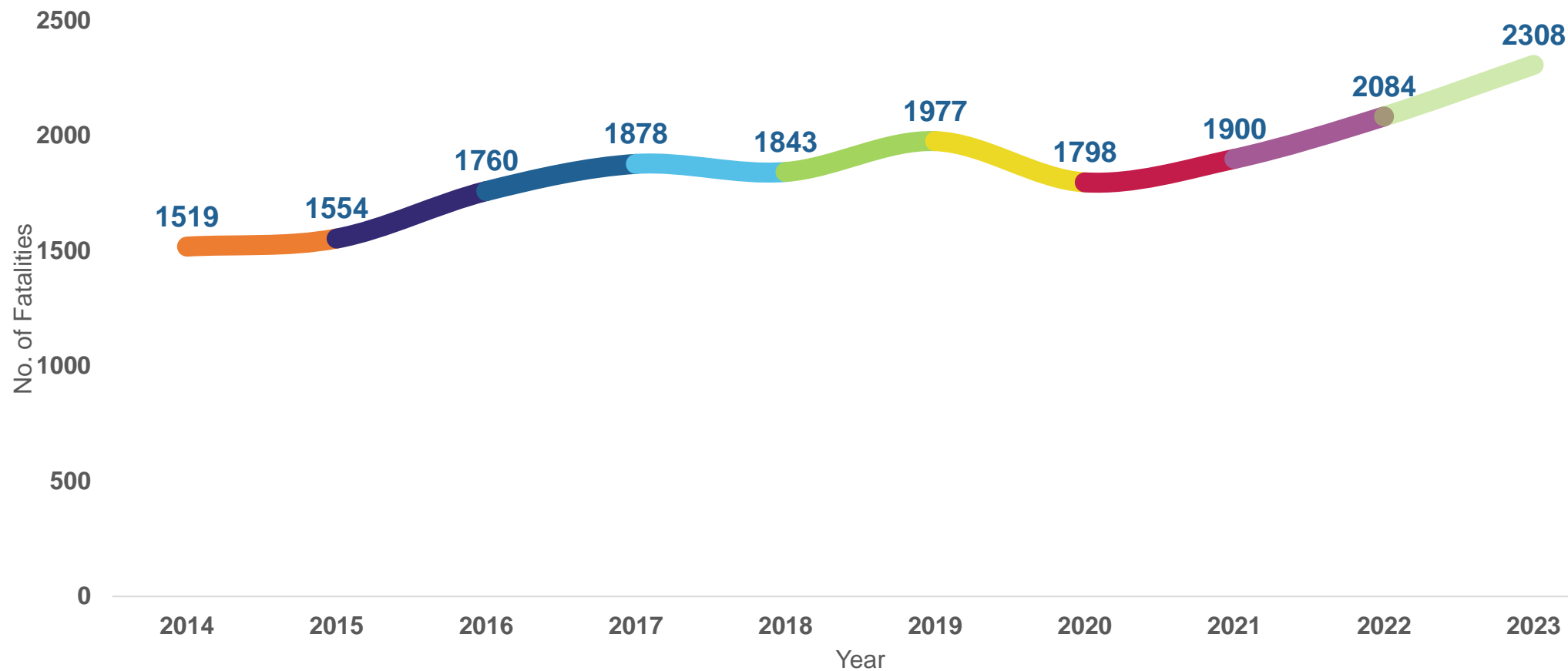
NACE Q - Human Health and Social Work Activities 2014- 2023

Non-Fatal Incidents: 18606



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By Year

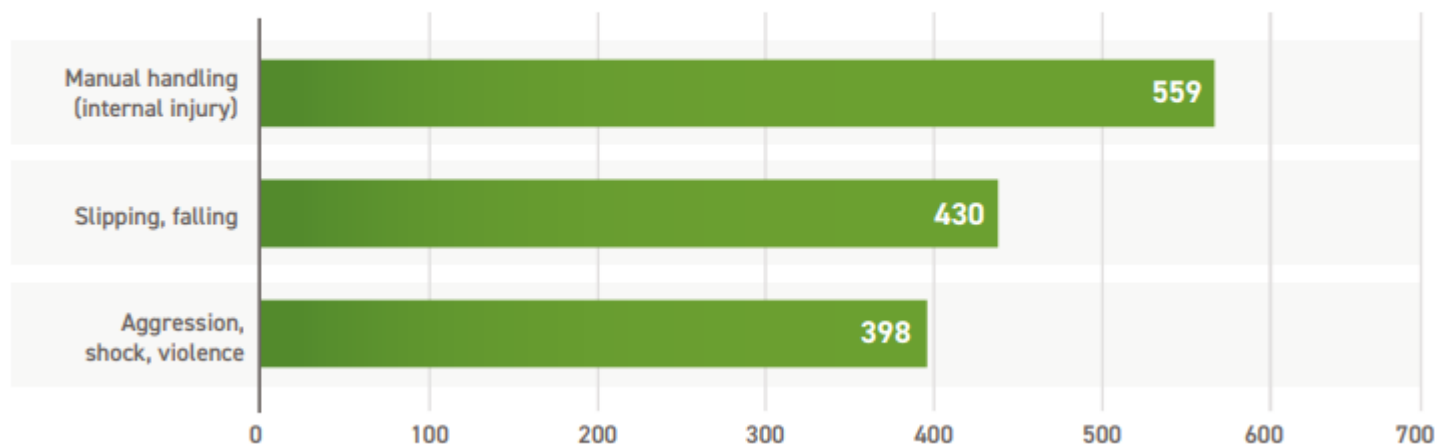


NACE Q - Human Health and Social Work

40% of all Injuries reported to the H.S.A. in the Health and social care sector in 2022 resulted in musculoskeletal injury due to exposure manual handling risk factors

Top three reported non-fatal triggers, 2022 (HSA).

Human Health and Social Work Activities



Ergonomic risk Management in the Health and Social Care Sector Hospitals:

Inspection Process to review inanimate manual Handling risk management:

- Risk Management Model: Focus on the work activities and the human element the need to manage risk exposure
- List of functional areas/flow process
- Documentation Review
- Tour of site: Examples of areas visited:
Radiology/Pharmacy/Catering/Laundry/Records
Management/Portering/stores/maintenance
- Wrap up and follow up

Examples of Interventions to address ergonomic risk in the health sector:

Introduction of bed mover bespoke solutions to eliminate need for pushing/pulling beds/trolleys over long distances

Introduction of electric tugs for moving laundry trolleys

Spring-loaded trolleys for use in laundry prep area

New layout of pot wash areas in kitchen to improve flow and work processes

Height adjustable desks for radiologists

Proposed New Display Screen Equipment Directive

- Needs to take account of new technologies
- Needs to take account of new ways of working (e.g. remote working/mobile working, etc)
- Needs to take account of new office equipment
- Work is ongoing to update the directive
- Ongoing consultation
- No draft legislation at this time at EU Level

Resources online

An Introduction to Ergonomic Risk Assessment



This short course is suitable for practitioners including managers, supervisors, safety officers and occupational health professionals who may be assessing work activities which involve manual handling and/or repetitive tasks involving the upper limbs. The course has a particular emphasis on the 5-step risk assessment process.

Please note that this course is intended to raise awareness and provide an overview of ergonomics and its relationship to the risk assessment process.

The course is not intended to replace the workplace specific information and training needs required by health and safety legislation and it does not denote competency in ergonomic risk assessment. Specific training and / or specialised advice may also be required.

Course duration: 20 minutes

Learning outcomes:

At the end of this course, you should be able to:

- understand the meaning of ergonomics and how it relates to manual handling work activities. and/or repetitive tasks involving the upper limbs.
- understand why ergonomic risk factors must be managed.
- understand the ergonomic risk factors that impact on musculoskeletal health.
- recognise risk assessment tools that can be used to assess ergonomic risk.
- apply a 5-step ergonomic risk assessment process for assessing work activities.

[Enter Course](#)

Risk Assessment Tools for Managing these risks



Example of Score Sheet for Assessment of a Manual Handling Task

Risk Factors	Colour Band (G,A,R or P)			Numerical Score		
	Lift	Carry	Team	Lift	Carry	Team
Load weight and lift/carry frequency	P			10		
Hand distance form the lower back	R			6		
Vertical lift region	G			0		
Trunk twisting / sideways bending Asymmetrical trunk / load carrying	R			2		
Postural constraints	A			1		
Grip on load	R			2		
Floor surface	G			0		
Other environment factors	G			0		
Carry distance (carrying only)						
Obstacles en route (carrying on)						
Communication and co-ordination (team handling only)						
Other risk factors e.g. individual factors, psychosocial factor, etc.	TOTAL SCORE:			21		

The Risk Assessment Process

Step 1	Task description	The metal billets have to be transferred manually from a table into a CNC Machine. The employee takes the billet from the table and carries it to the CNC Machine and then reaches in to place the billet in position in the machine.
Step 2	Collect Technical Information	This is a manual handling task and the appropriate risk assessment tool to use in this case is the Mac Tool. There are changes in posture as the billet is transferred from the table to the CNC. The billet can weigh 20-130kg. The table is at waist height. The floor is clean and free of debris. There are no handles on the load and it is difficult to handle.
Step 3	Identify the risk factors using the relevant risk assessment tool and fill in the relevant score sheet (e.g. MAC Tool)	Below is a completed MAC Tool score sheet for this task: There are a number of ergonomic risk factors with respect to this handling task and these include the load weight (billet weight up to 130kg), hand distance from the lower back (upper arms angled away from the body and trunk), trunk twisting and sideways bending when placing the billet into the CNC machine.
Step 4	Identify the improvements to be put in place	There are high risk ergonomic risk factors identified in the score sheet for this task and the employer has in consultation with the person that does the job and a number of other colleagues identified a solution to avoid the handling of the billets. A custom engineered billet loader was fixed to the floor at each CNC machine centre and all operators were trained to use it.
Step 5	Review the effectiveness of the improvements	The new engineering intervention is very effective in that it has eliminated the ergonomic risk factors completely. The billet loader eliminates the manual lifting of the billet and the billet loader can be operated with a neutral standing posture.



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Floor surface	G			0		
Other environment factors	G			0		
Carry distance (carrying only)						
Obstacles en route (carrying on)						
Communication and co-ordination (team handling only)						
Other risk factors e.g. individual factors, psychosocial factor, etc.	TOTAL SCORE:			21		



Links to supporting guidance/social media

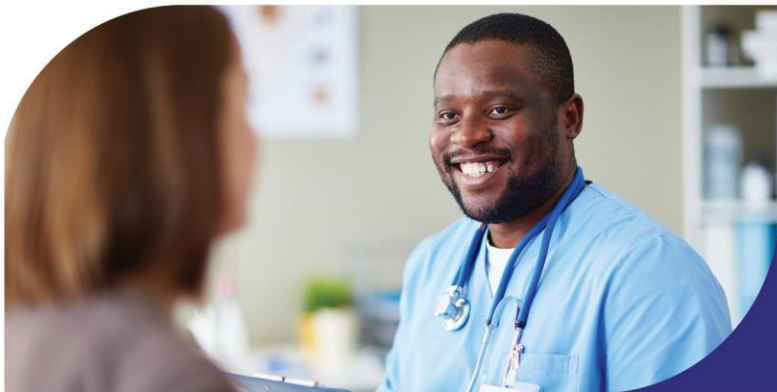
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Go raibh maith agaibh
Thank you



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