



Bone Health & Women with Intellectual Disabilities: Translation from Research to Practice

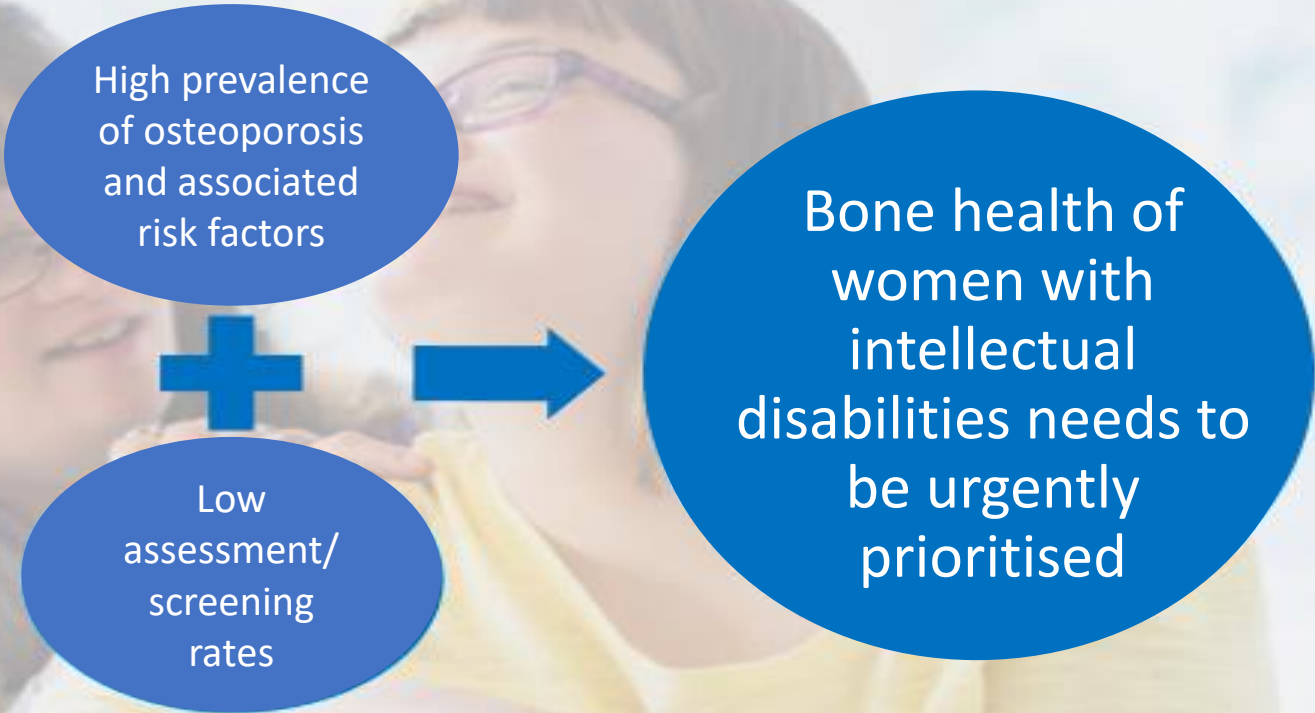
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High prevalence
of osteoporosis
and associated
risk factors



Low
assessment/
screening
rates



Bone health of
women with
intellectual
disabilities needs to
be urgently
prioritised



Bone Health Assessment

History taking

- **Family history**
- **Personal history** – level of ID, syndrome, menopausal history
- **Fracture history**
 - Site – wrist, hip or vertebra
 - Trauma/low trauma
- **Chronic health conditions**
 - Endocrine, GIT, Respiratory
- **Medication review**
 - AED
 - PPI
 - Antipsychotic meds
 - Glucocorticoids
- **Behavioural lifestyle**
 - Smoking
 - Drinking alcohol
 - Exercise

Physical assessment

- **Height**
 - Height loss (2-16cms red flag)
- **BMI**
 - Overweight/obesity
 - Underweight
- **Body shape/change in posture**
 - Curvature of the spine
- **Unexplained Pain**
- **Bowel status**
 - Constipation can lead to malabsorption of bone-essential nutrients- calcium, Vit D, Vit K

Further referral and assessment

- **Bloods**
 - FBC, TSH, Glucose, HBA1C
 - Vitamin D : <25nmol/L to define deficiency and 25-50nmol/L to define insufficiency
 - Calcium levels : 8.6 – 10.3 mg/dl
- **Screening**

DXA if possible

OR

Alternative screening device (Echolight, QUS)

Challenges with DXA



Challenges with DXA

- Lack of hoist facilities
- Physical abnormalities
- Positioning
- Anxiety
- Behavioural & communication issues

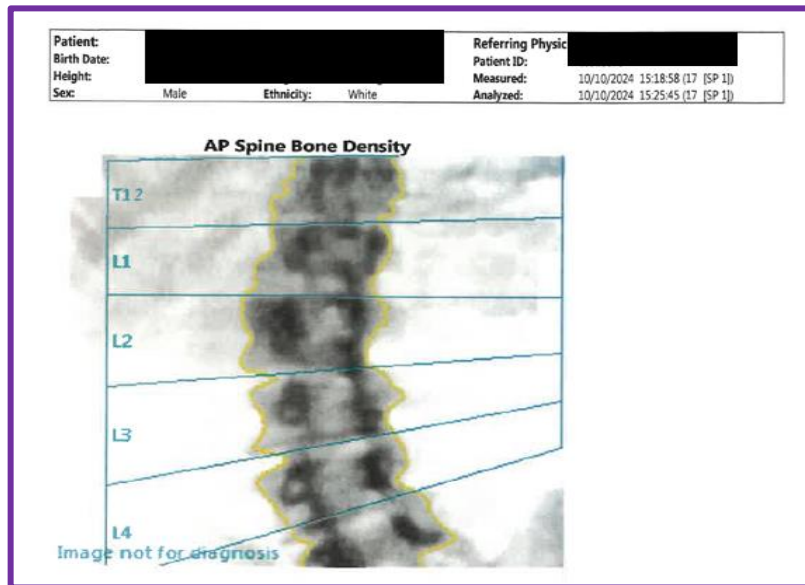
Challenges with Treatment

- Lack of feasible diagnostics impacts on initiation of treatment
- If treatment is initiated based on risk factors, there is no method of monitoring the effects of treatment



DXA Access

22%
Successfully
accessed
DXA



Densitometry: T-score: USA (Combined NHANES/Lunar), Z-score: UK			
Region	BMD (g/cm ²)	YA T-score	AM Z-score
L1	1.108	-0.2	0.0
L2	1.201	0.0	0.1
L3	1.076	-1.0	-0.9
L4	0.980	-1.8	-1.7
L1-L4	1.093	-0.7	-0.6



Echolight- Alternative Screening Device



Radiofrequency Echographic Multi Spectrometry (REMS) is a non-ionizing technology for measuring bone mineral density (BMD) and diagnosing osteoporosis. A REMS densitometer is a small ultrasound device equipped with a convex probe and evaluation of BMD is performed at the femoral hip and lumbar spine (L1–L4)

- Diagnostic & monitoring device
- Portable
- Approximately 2 minutes
- Doesn't require the patient to lie in exact position for long periods
- Instant read out results
- Reasonable adjustments can be provided



Clinical Practice- Echolight Data

N=128
Accessed Echolight



59%
(n=75)

28% Normal BMD
(n=21/75)

33% Osteopenia
(n=25/75)

39% Osteoporosis
(n=29/75)



41%
(n=53)

32% Normal BMD
(n=17/53)

38% Osteopenia
(n=20/53)

30% Osteoporosis
(n=16/53)





Quantitative Ultrasound (QUS)



Measures fracture risk

Quick & painless

Instant readout results

No radiation

- Therapeutic Decisions

- Central DXA measurements at the spine and femur are preferred for making therapeutic decisions and should be used if possible. However, if central DXA cannot be done, pharmacologic treatment can be initiated if the fracture probability, as assessed by heel QUS, using device-specific thresholds and in conjunction with clinical risk factors, is sufficiently high. (Examples of device-specific thresholds are provided in the full-text documents printed in the *Journal of Clinical Densitometry*.)



Clinical Practice- QUS data

N=51
Accessed QUS



42%
(n=21)

10% Normal BMD

(n=2/21)

43% Osteopenia

(n=9/21)

47% Osteoporosis

(n=10/21)



58%
(n=30)

17% Normal BMD

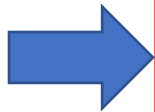
(n=5/30)

30% Osteopenia

(n=9/30)

53% Osteoporosis

(n=16/30)





Bone Health Assessment & Treatment Guidelines



Foillimneacht na Seirbhíse Sláinte
Health Service Executive

Advanced Nurse Practice - Bone Health Screening and Treatment Guideline

Is this document a:

Policy ☐ Procedure ☐ Protocol ☐ Guideline ☒

Insert Service Name(s), Directorate and applicable Location(s):

Title of PPPG Development Group:	Advanced Nurse Practice - Bone Health Screening and Treatment Guideline
Developed by:	Anne Power- Wexford Residential Intellectual Disability Service Carmel Erskine- Donegal Intellectual Disability Service Niamh Orla Finan- Brothers of Charity West Region Stephanie Carolan- Louth/ Meath Intellectual Disability Services Irene Drury- Westmeath Intellectual Disability Service Geraldine O'Callaghan-COPE Services, Cork
Reference Number:	
Version Number:	0001



Bone modifying
medication



Strength and
balance training



Nutritious diet

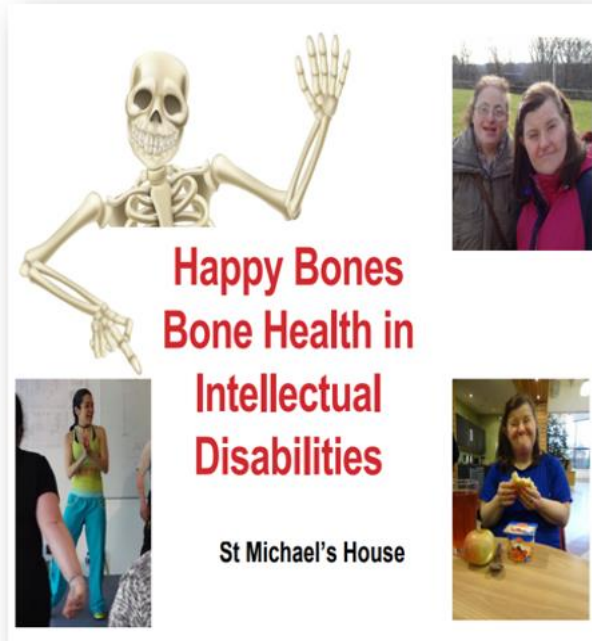


Supplementation





Happy Bones- Community of Practice





Get Wise About Your Bone Health

Navigating the modules

Get Wise About Visiting the Doctor

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Thank you

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