



Envisager l'arrêt de la conduite – Comment en parler avec le patient et faciliter la transition

Prof. Paul Vaucher

PhD, MSci Clinical Trials, Osteopathe GDK-CDS

Haute Ecole de Santé Fribourg, Haute Ecole Spécialisée de Suisse Occidentale
Centre Romand de Médecine Légale, Centre Hospitalier Universitaire Vaudois

Forum de recherche - HEdS-Fr - avril 2017



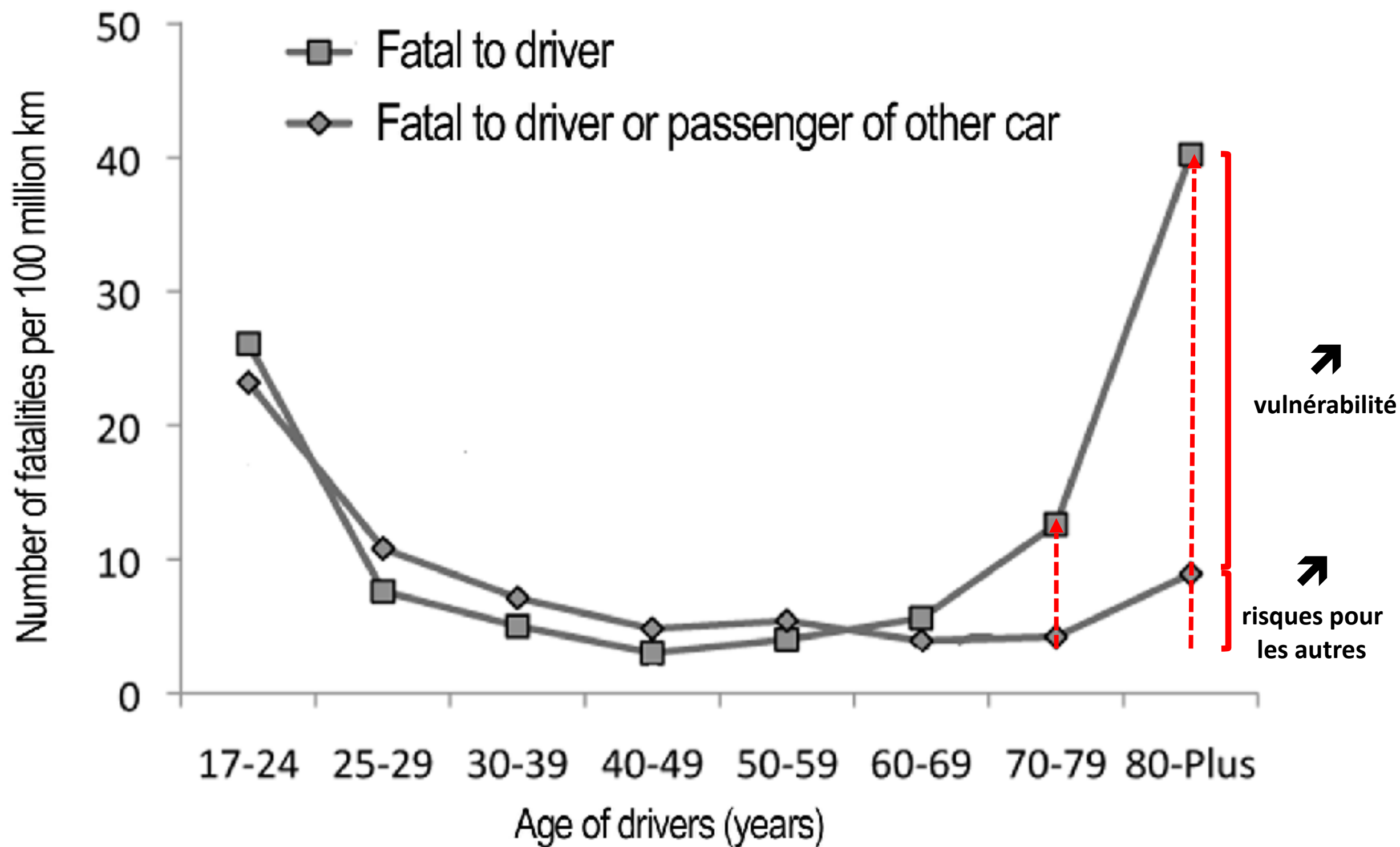
Image de <http://www.odyssee-montagne.fr>

Plan

1. Les aspirations conflictuelles
 - Sécurité routière versus isolement social
 - Détérioration potentielle de la relation thérapeutique
2. Etablir un terrain commun
 - Les responsabilités communes
 - Eviter de faire du tort (à soi-même ou aux autres)
 - Faire au mieux en vue de la situation
3. Faciliter les changements
 - Surmonter les résistances
 - Reconnaître les besoins
 - Permettre au patient de s'approprier la décision
 - Modifier le comportement
4. À retenir!

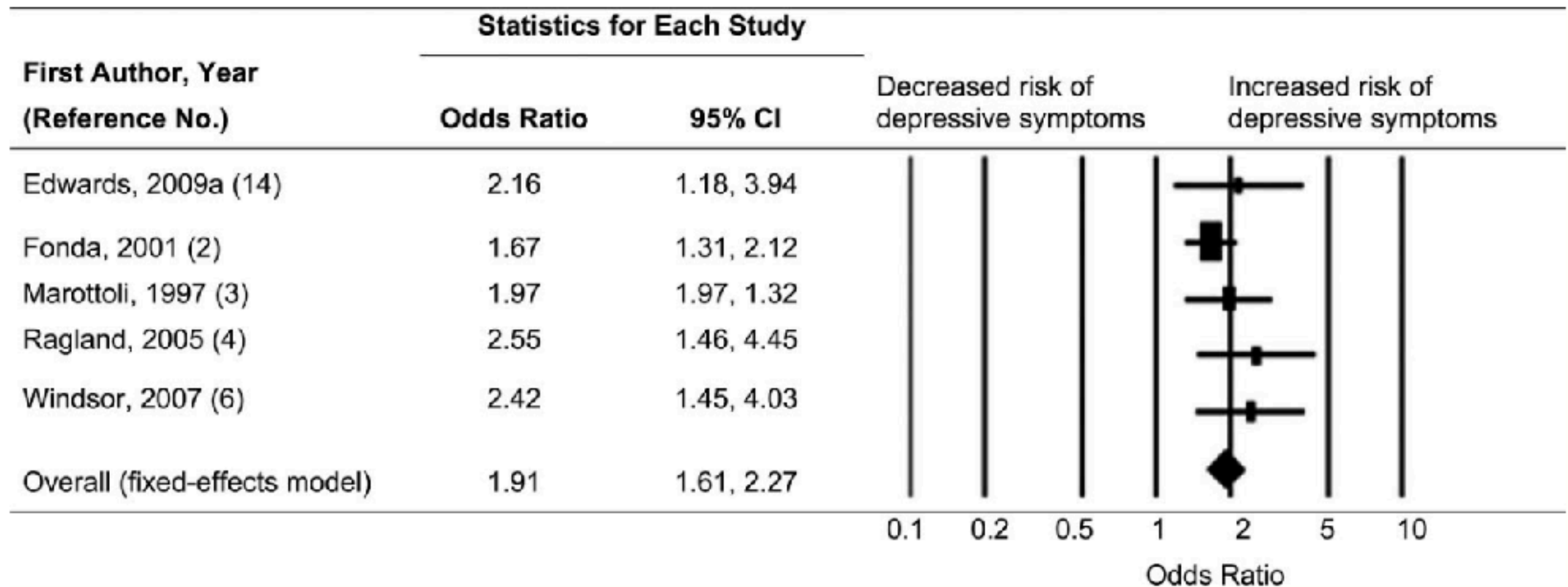
Une véritable menace ?





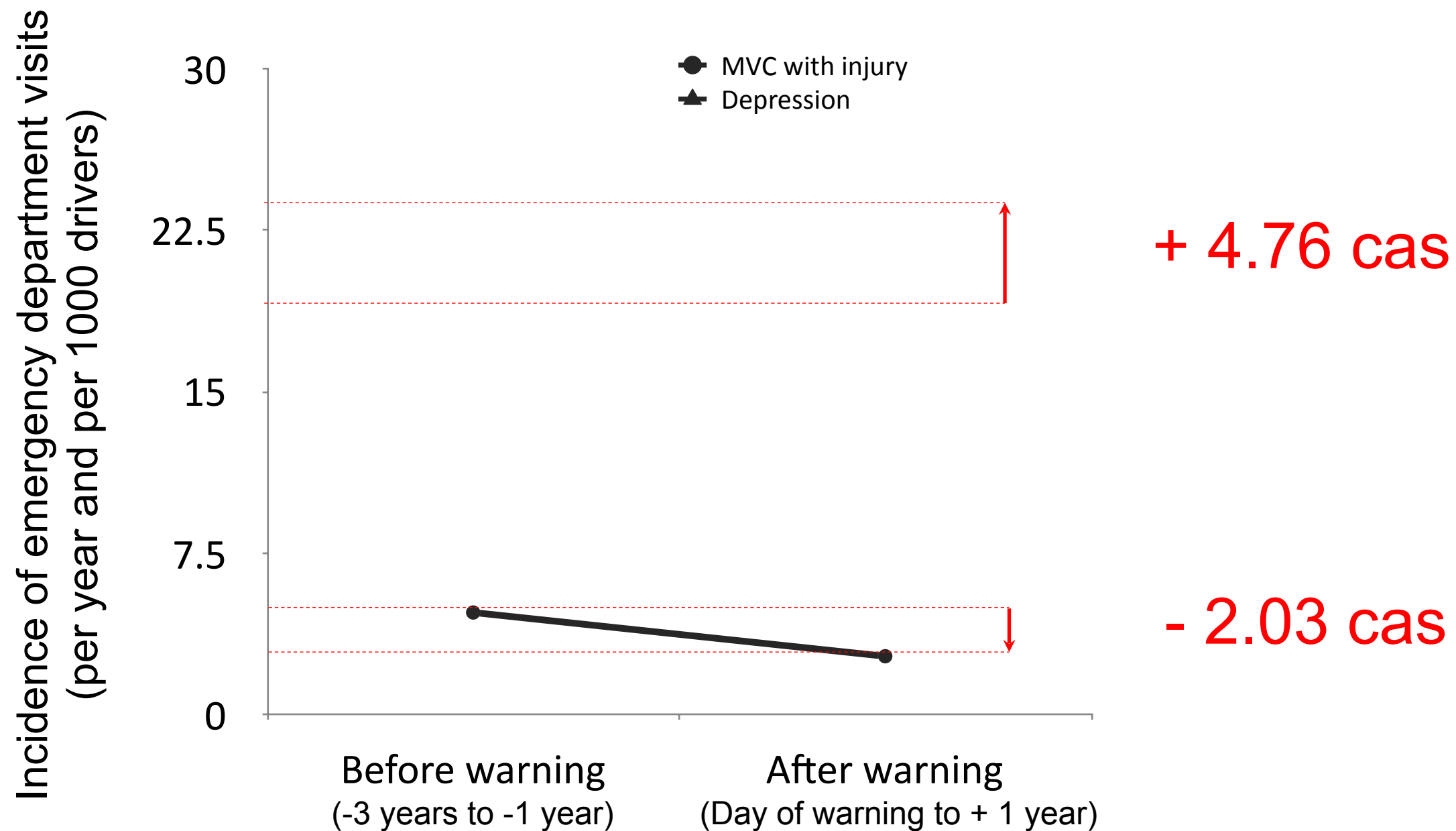
Langford et al. (2008) *Traffic Inj Prev*; (9):181-189

Arrêt de la conduite et signes de dépression



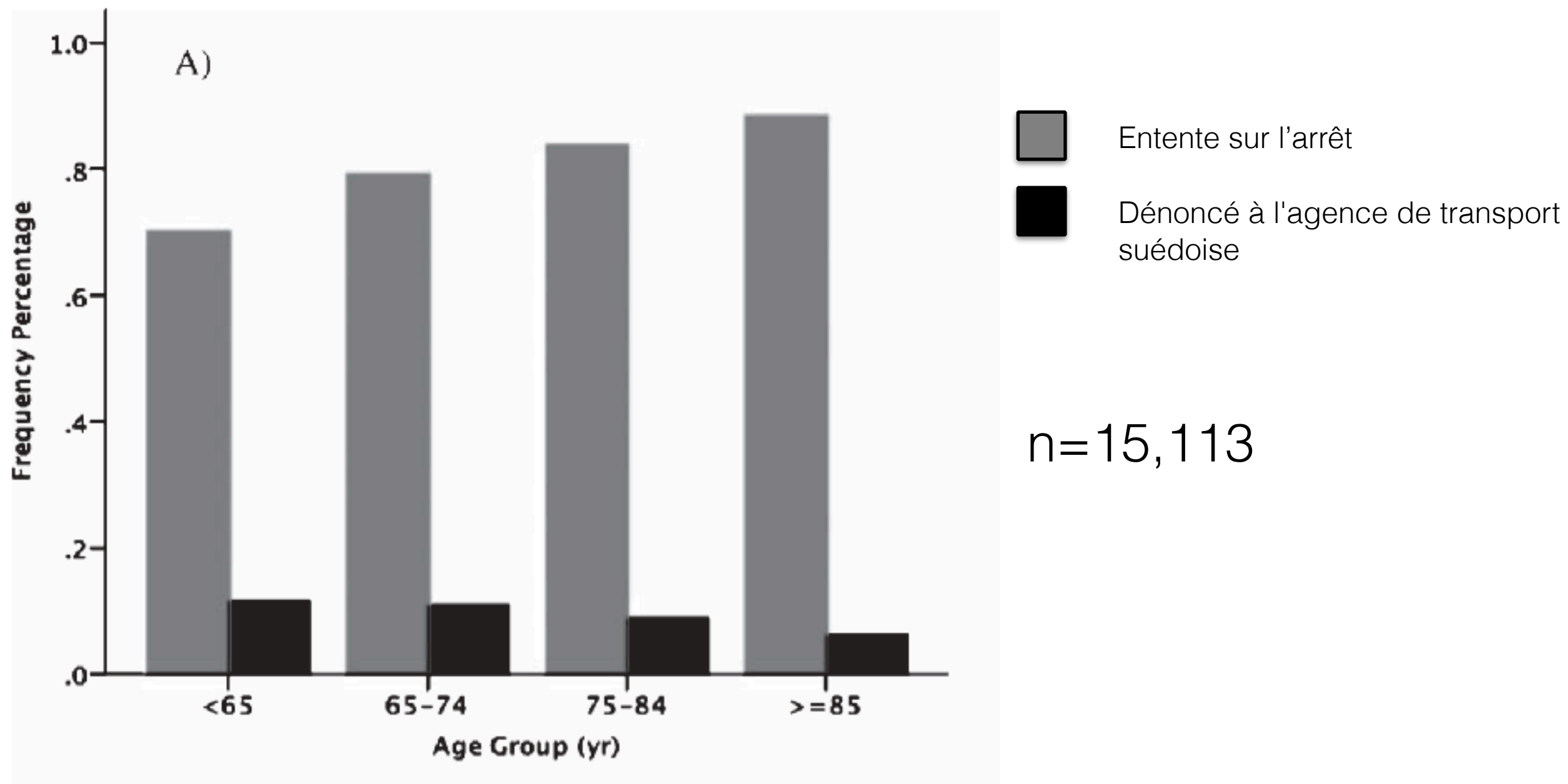
Chihuri et al. (2016) *J Am Geriatr Soc*;64(2):332-341

Arrêt forcé ou consenti



Redelmeier et al. (2012) *New England J Med*;367(13):1228-1236.

Arrêt de la conduite chez les suédois souffrant de démence



Lovas et al. (2016) *J Alzheimers Dis*;53(2):631-638.

Applications cliniques

1. Gestion des aspirations conflictuelles

- Si possible, maintenir l'alliance thérapeutique,
- discuter des risques (dommage physique vs. dépression/isolation sociale),
- surmonter le sentiment de menace -> définir un terrain d'entente

Responsabilités (CH)

741.51

Circulation routière

Art. 5i Réalisation des examens et communication des résultats

¹ L'autorité cantonale met à la disposition du médecin ou du psychologue tous les documents qui concernent l'aptitude à la conduite de la personne à examiner.

² Les médecins sont tenus de procéder aux examens visés aux art. 11*b*, 27, al. 1, et 65, al. 2, let. d, conformément aux annexes 2 et 2*a*.

³ Les médecins et les psychologues sont tenus de communiquer les résultats d'examen à l'autorité cantonale.

⁴ Les médecins utilisent, pour communiquer les résultats d'examen à l'autorité cantonale, les formulaires reproduits à:

- a. l'annexe 3 en cas d'examens selon les art. 6, al. 4, let. a, ch. 1, 11*b*, 27, al. 1, et 65, al. 2, let. d;
- b. l'annexe 3*a* en cas d'examens selon les art. 7, al. 1^{bis}, et 9, al. 4;
- c. l'annexe 4 en cas d'examens selon l'art. 9, al. 1.

Ordonnance réglant l'admission à la circulation routière, OAC 741.51, 01.10.2016

Responsabilités (CH)

4 Troubles psychiques

Pas de troubles psychiques avec effets importants sur la perception de la réalité, l'acquisition et le traitement de l'information, la réactivité ou l'adaptation du comportement à la situation. Pas de réduction des capacités de réserve ayant des effets sur la conduite.

Pas de symptômes maniaques ou pas de symptômes dépressifs importants.

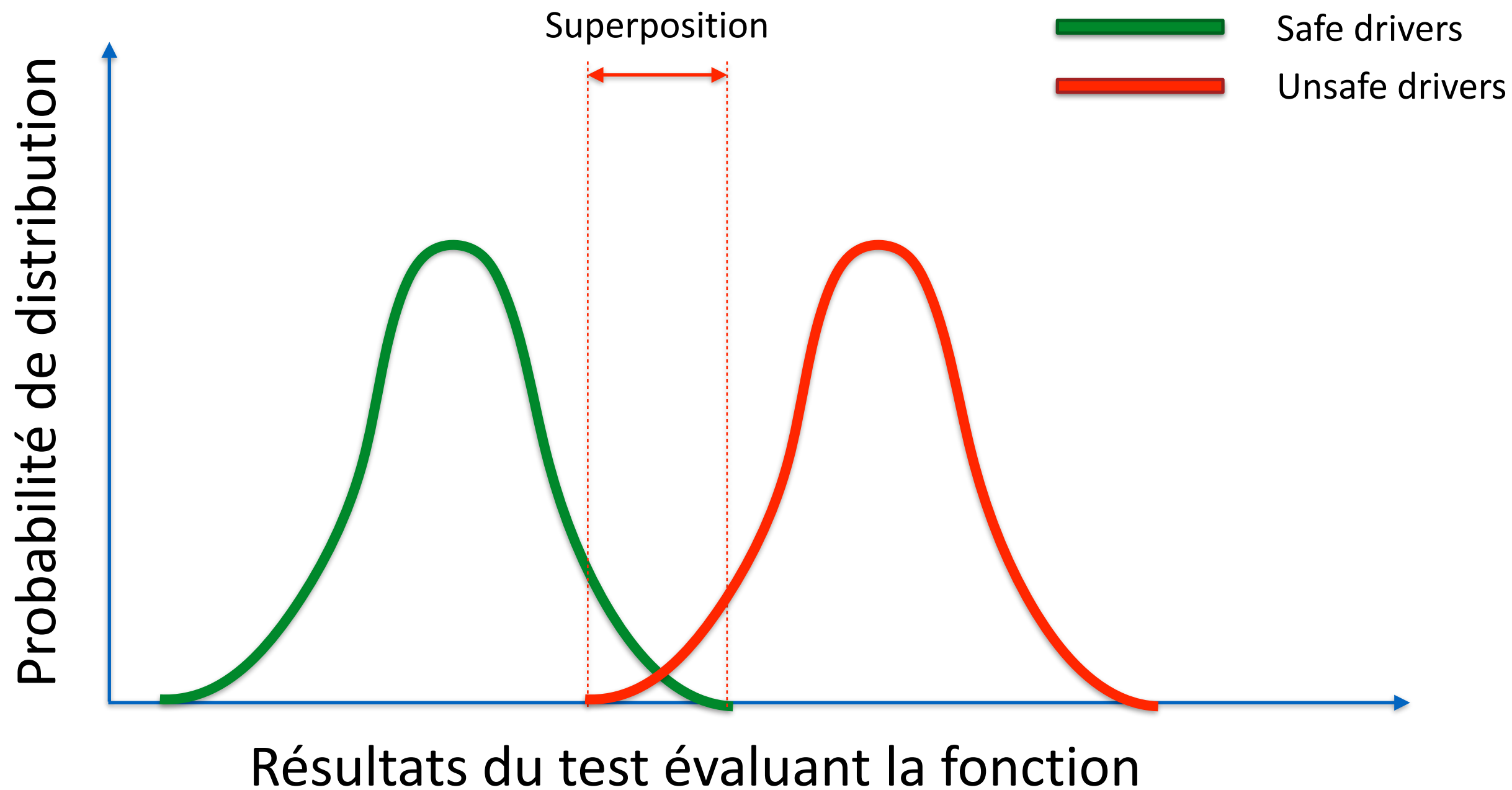
Pas de troubles de la personnalité considérables, notamment pas de troubles du comportement asociaux marqués.

Pas de déficiences intellectuelles majeures.

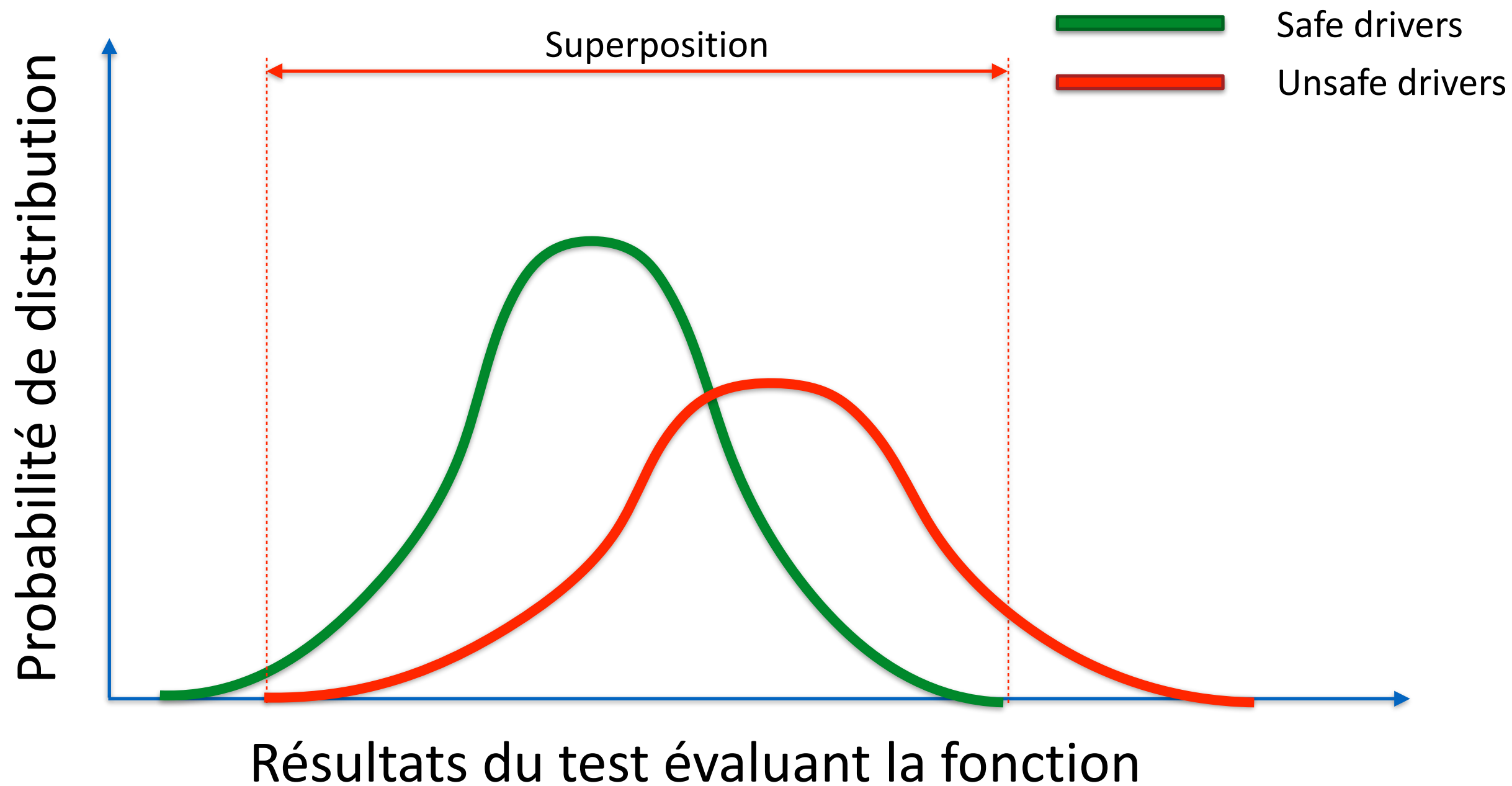
5 Troubles des fonctions cérébrales d'origine organique

Pas de maladies ou de troubles psychiques d'origine organique perturbant de façon significative la conscience, l'orientation, la mémoire, l'intellect, la réactivité et pas d'autre trouble des fonctions cérébrales. Pas de symptômes maniaques ou dépressifs importants. Pas de troubles du comportement ayant des effets sur la conduite. Pas de réduction des capacités de réserve ayant des effets sur la conduite.

Important ?



Important ?



Combien de gens dans la zone grise ?

COGNITIVE TEST	COGNITIVE FUNCTION	N _{studies}	N _{participant}	M d_w	SD d_w	95% CIs	%OL	N _{fs}	STUDY REFERENCES
TMT; Part A and B	Attention	1	60	1.18*	.	0.63 1.72	38	5	Daigneault <i>et al.</i> , 2002
Stroop Colour Word Test – controlled	Attention	1	60	1.01*	.	0.48 1.55	45	4	Daigneault <i>et al.</i> , 2002
UFOV; total score	Attention	3	431	1.00*	0.29	0.88 1.11	45	12	Ball <i>et al.</i> , 1993; DeRaedt <i>et al.</i> , 2000; Owsley <i>et al.</i> , 1991
WAIS-R Block Design	Construction	1	54	0.95*	.	0.39 1.52	45	4	Lundberg <i>et al.</i> , 1998
APT-PC; Missing Object	Perception	1	407	0.82*	.	0.72 0.92	53	3	McKnight and McKnight, 1999
Stroop Colour Word Test – automatic	Attention	1	60	0.80*	.	0.28 1.33	53	3	Daigneault <i>et al.</i> , 2002
Tower of London	Executive functions	1	60	0.72	.	0.20 1.25	57	3	Daigneault <i>et al.</i> , 2002
Paper Folding Task	Construction	1	84	0.70	.	0.48 0.92	57	2	DeRaedt <i>et al.</i> , 2000
APT-PC; Selective Attention	Attention	1	407	0.65	.	0.56 0.75	57	2	McKnight and McKnight, 1999
Complex RT task	Attention	3	545	0.64	0.31	0.55 0.73	62	7	DeRaedt <i>et al.</i> , 2000; Lundberg <i>et al.</i> , 1998; McKnight and McKnight, 1999
Word Lists; Recognition	Memory	1	54	0.63	.	0.07 1.18	62	2	Lundberg <i>et al.</i> , 1998
APT-PC; Delayed Recall	Memory	1	407	0.63	.	0.53 0.73	62	2	McKnight and McKnight, 1999
APT-PC; Motion Detection	Perception	1	407	0.62	.	0.52 0.72	62	2	McKnight and McKnight, 1999
APT-PC; Digit Span recognition	Memory	1	407	0.62	.	0.52 0.72	62	2	McKnight and McKnight, 1999
APT-PC; Digit Matching	Perception	1	407	0.61	.	0.51 0.71	62	2	McKnight and McKnight, 1999
MOMSSE; complete	Mental ability	3	439	0.60	0.19	0.48 0.73	62	6	Ball <i>et al.</i> , 1993; Owsley <i>et al.</i> , 1991; Oxley <i>et al.</i> , 2005
Word Lists; recall	Memory	1	54	0.57	.	0.02 1.12	62	2	Lundberg <i>et al.</i> , 1998
Ergovision; Movement Perception	Perception	1	84	0.54	.	0.32 0.76	67	2	DeRaedt <i>et al.</i> , 2000
APT-PC; Figure Matching	Perception	1	407	0.53	.	0.43 0.63	67	2	McKnight and McKnight, 1999
Wisconsin Card Sort Task	Concept formation	1	60	0.52	.	0.00 1.04	67	2	Daigneault <i>et al.</i> , 2002
APT-PC; Perceptual Speed	Perception	1	407	0.52	.	0.42 0.61	67	2	McKnight and McKnight, 1999
Cancellation Test	Perception	1	125	0.50	.	0.14 0.86	67	2	Marottoli <i>et al.</i> , 1998
APT-PC; Divided Attention	Attention	2	461	0.50	0.10	0.40 0.59	67	3	Lundberg <i>et al.</i> , 1998; McKnight and McKnight, 1999
WAIS-R Digit Symbol	Attention	1	54	0.48	.	-0.07 1.02	67	1	Lundberg <i>et al.</i> , 1998
Rey Complex Figure immediate recall	Memory	2	348	0.42	0.36	0.19 0.66	73	2	Ball <i>et al.</i> , 1993; Lundberg <i>et al.</i> , 1998
APT-PC; Figure Recognition	Memory	1	407	0.41	.	0.31 0.51	73	1	McKnight and McKnight, 1999
WAIS-R Similarities	Concept formation	1	54	0.39	.	-0.16 0.93	73	1	Lundberg <i>et al.</i> , 1998

Mathias & Lucas (2009) Int Psychogeriatrics; 21(4):637-653

Combien de gens dans la zone grise ?

WMS Visual Reproduction	Memory	1	294	0.36	.	0.11	0.62	73	1	Ball <i>et al.</i> , 1993
RAVLT; delayed recall	Memory	1	54	0.36	.	-0.18	0.91	73	1	Lundberg <i>et al.</i> , 1998
APT-PC; Field Dependence	Perception	1	407	0.36	.	0.26	0.45	73	1	McKnight and McKnight, 1999
Rey Complex Figure; copy	Construction	2	348	0.30	0.21	0.07	0.53	79	1	Ball <i>et al.</i> , 1993; Lundberg <i>et al.</i> , 1998
RAVLT; total	Memory	1	54	0.30	.	-0.24	0.85	79	1	Lundberg <i>et al.</i> , 1998
F-Z; Incompatibility	Perception	1	84	0.28	.	0.07	0.50	79	0	DeRaedt <i>et al.</i> , 2000
UFOV; divided attention	Attention	2	2002	0.27	0.10	0.08	0.46	79	1	Ball <i>et al.</i> , 2006; Oxley <i>et al.</i> , 2005
Missing Card Identification	Reasoning	1	125	0.27	.	-0.09	0.63	79	0	Marottoli <i>et al.</i> , 1998
MVPT; visual closure	Perception	1	1910	0.26	.	0.05	0.47	79	0	Ball <i>et al.</i> , 2006
Simple RT task	Attention	3	2236	0.24	0.22	0.20	0.29	85	1	Lundberg <i>et al.</i> , 1998; McKnight and McKnight, 1999; Stutts <i>et al.</i> , 1998
Copy Task	Construction	1	125	0.19	.	-0.17	0.55	85	0	Marottoli <i>et al.</i> , 1998
Trail Making Test, Part B	Attention	7	4310	0.17	0.14	0.12	0.21	85	0	Ball <i>et al.</i> , 1993; Ball <i>et al.</i> , 2006; Daigneault <i>et al.</i> , 2002; Lundberg <i>et al.</i> , 1998; Marottoli <i>et al.</i> , 1998; Oxley <i>et al.</i> , 2005; Stutts <i>et al.</i> , 1998
Dot Counting	Attention	1	84	0.17	.	-0.05	0.39	85	0	DeRaedt <i>et al.</i> , 2000
Trail Making Test; Part A	Attention	6	4218	0.15	0.32	0.11	0.20	85	0	Ball <i>et al.</i> , 1993; Ball <i>et al.</i> , 2006; Daigneault <i>et al.</i> , 2002; Lundberg <i>et al.</i> , 1998; Marottoli <i>et al.</i> , 1998; Stutts <i>et al.</i> , 1998
Traffic Sign Recognition Test	Language and knowledge	3	2020	0.10	0.26	0.06	0.15	92	0	MacGregor, <i>et al.</i> , 2001; Marattoli <i>et al.</i> , 1998; Stutts <i>et al.</i> , 1998
Hooper Visual Organisation Test	Perception	1	125	0.10	.	-0.26	0.45	92	0	Marattoli <i>et al.</i> , 1998
MMSE	Mental ability	2	245	0.09	0.02	-0.16	0.34	92	0	MacGregor <i>et al.</i> , 2001; Marattoli <i>et al.</i> , 1998
GRIMPS; delayed recall	Memory	1	1910	0.09	.	-0.12	0.31	92	0	Ball <i>et al.</i> , 2006
UFOV; selective attention	Attention	1	92	0.08	.	-0.33	0.49	92	0	Oxley <i>et al.</i> , 2005
BDS; Short Blessed Test	Mental ability	1	1775	0.08	.	0.04	0.13	92	0	Stutts <i>et al.</i> , 1998
APT-PC; RT Inhibition	Attention	1	54	0.08	.	-0.46	0.62	92	0	Lundberg <i>et al.</i> , 1998
GRIMPS; cued recall	Memory	1	1910	0.05	.	-0.16	0.26	92	0	Ball <i>et al.</i> , 2006
MVPT; total score	Perception	1	92	0.04	.	-0.37	0.45	100	0	Oxley <i>et al.</i> , 2005

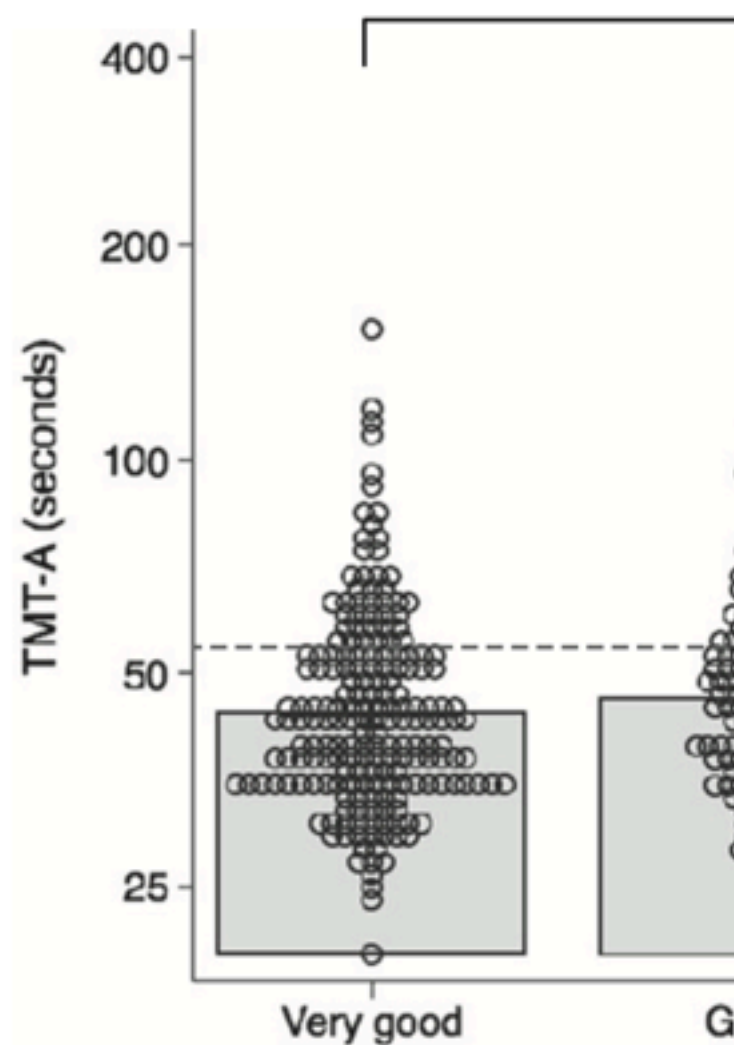
$N_{studies}$ = number of studies contributing to the effect size; $N_{participants}$ = total number of participants; $M d_w$ = weighted mean effect size; $SD d_w$ = standard deviation of the effect size; 95% CI = 95% confidence intervals; OL% = percentage overlap between pass and fail groups; N_B = Fail safe N; UFOV = Useful Field of View; WAIS-R = Wechsler Adult Intelligence Scale-Revised; APT-PC = Automated Psychological Test- Computer Administration; MOMSSE; Mattis Organic Mental Syndrome Screening Examination; WMS = Wechsler Memory Scale; RAVLT = Rey Auditory-Verbal Learning Test; F-Z = Fimm Zimmerman Test Battery; MVPT = Motor Free Visual Perception Test; RT = Reaction Time; MMSE = Mini-mental State Examination; GRIMPS = Gross Impairments Screening Battery; BDS = Blessed Dementia Scale.

*Effect size met the study criteria; $d > 0.8$, $N_B > N_{studies}$, 95% CIs did not span zero.

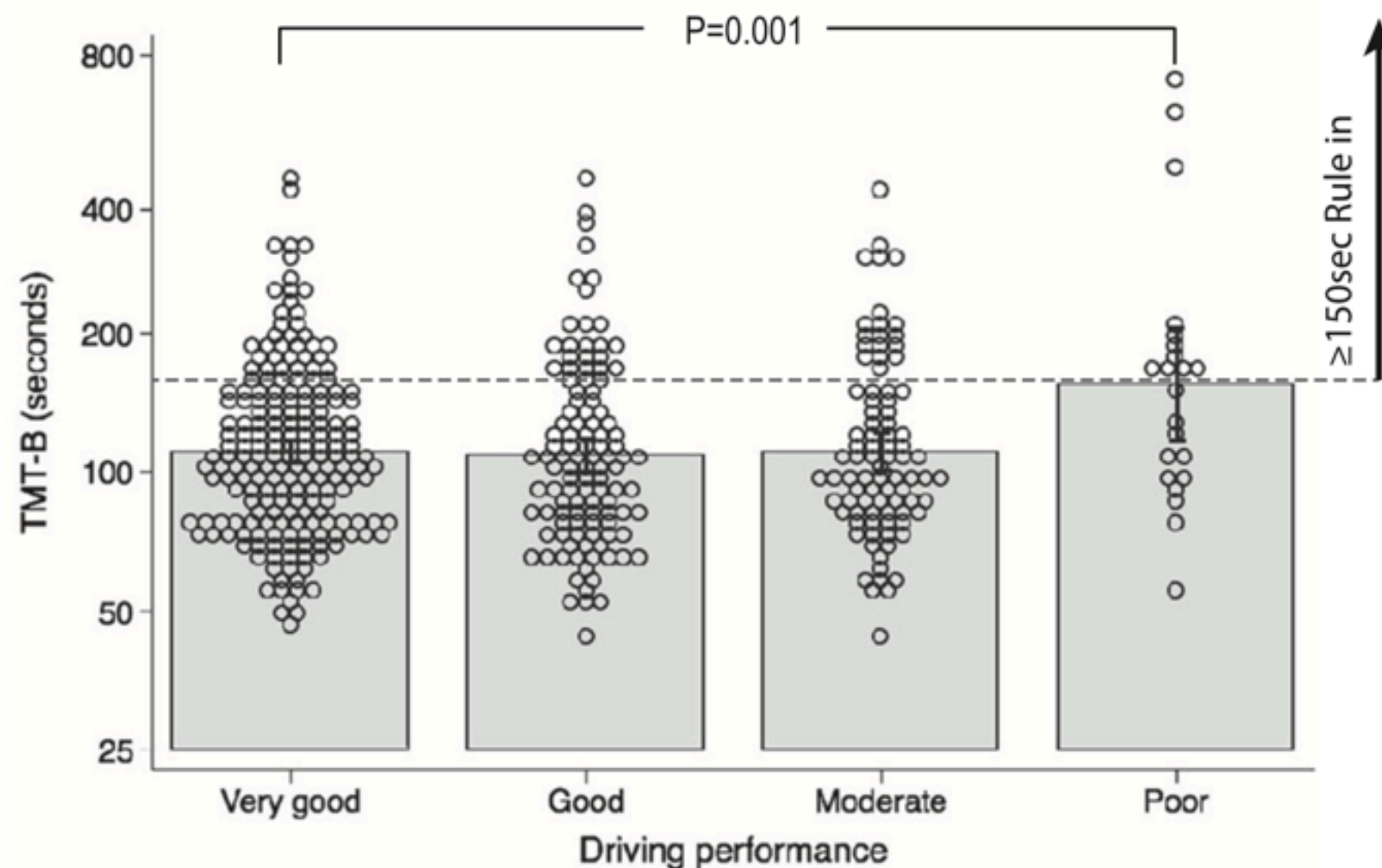
Mathias & Lucas (2009) Int Psychogeriatrics; 21(4):637-653

Combien de gens dans la zone grise ?

A Trail Making Test part A (TMT-A)



B Trail Making Test part B (TMT-B)



Vaucher et al (2014) BMC Geriatrics; 14:123

Responsabilités (Irlande)

2.0 Roles and responsibilities

Rapporter

Evaluer
Conseiller

Traiter

Reporter

Table 1: Roles and responsibilities of drivers, health professionals and National Driver Licence Service

Driver

- To report to the National Driver Licence Service (NDLS) and their insurance provider any long-term or permanent injury or illness that may affect their ability to drive without elevated risk: if holding a licence from an EU country other than Ireland, or a recognised country for licence exchange, and developing a condition which could elevate risk of impairment while driving, the driver must contact the NDLS to arrange for an exchange of their licence.
- To respond truthfully to questions from the health professional regarding their health status and the likely impact on their driving ability.
- To adhere to prescribed medical treatment and monitor and manage their condition(s) and any adaptations with ongoing consideration of their fitness to drive.
- To comply with requirements of their licence as appropriate, including periodic medical reviews.

Health professional

- To assess the person's medical fitness to drive based on the current *Sláinte agus Tiomáint* medical standards.
- To advise the person regarding the impact of their medical condition or disability on their ability to drive and recommend restrictions and ongoing monitoring as required.
- To advise the person of their responsibility to report their condition to the NDLS if their long-term or permanent injury or illness may affect their ability to drive.
- To treat, monitor and manage the person's condition with ongoing consideration of their fitness to drive.
- To report to the NDLS regarding a person's fitness to drive in the exceptional circumstances where there is a risk to the public and the driver cannot or will not cease driving.

Sláinte agus Tiomáint/Medical Fitness to Drive Guidelines (Group 1 and 2 Drivers), April 2016, Road Safety Authority

S'approprier la décision – Processus décisionnel partagé?

Box 1. Factors that facilitate an older patient's preference for, and involvement in, decisions about their health care, which also nurture trust in the GP-patient relationship

GP factors

GP characteristics

Patient-centred

Caring

Holistic

Open and honest

GP communication skills

Attentive listening

Provision of explanation

Acknowledgement of the patient 'as an equal'

Provision of choice

Willing to discuss GP expertise

Offering of expert opinion

Willing to discuss uncertainties

Butterworth et Campbell (2014) *Brit J Gen Pract*; **64**(628):e709-e718.

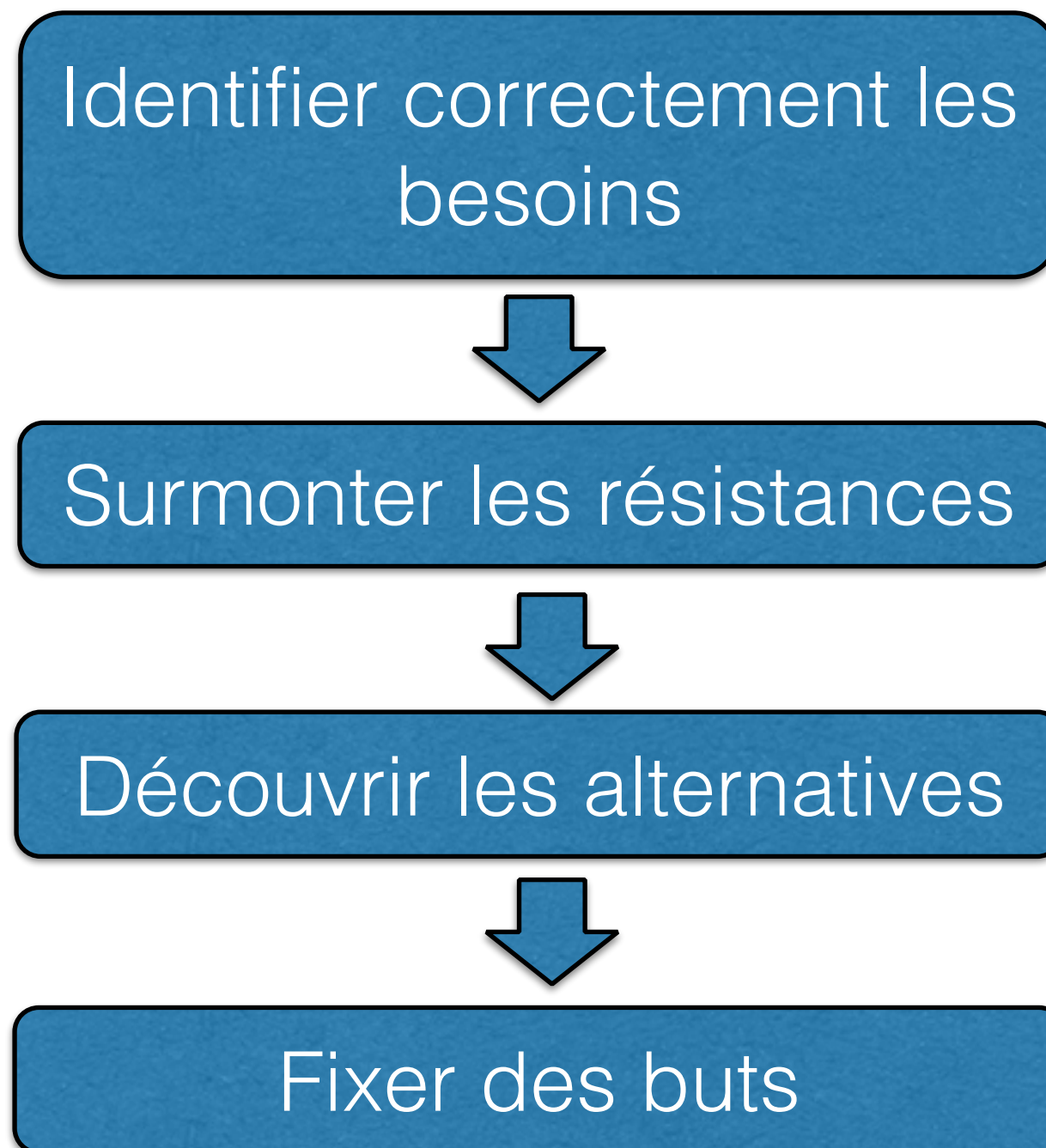
Mathias & Lucas (2009) *International psychogeriatrics / IPA*; **21**(4):637-653

Applications cliniques

2. Déterminer un terrain commun

- Investiguer et s'informer
- Prévenir des dommages
- Améliorer ou maintenir la mobilité
- Faciliter le changement

Aider au changement



Certifier le besoin de changement

- Utiliser des tests adaptés
- Expliquer le lien avec la conduite avant d'effectuer le test
- Recourir à l'auto-évaluation, identifier les incongruences et donner un retour¹
- Faire le lien avec les expériences vécues
- Confirmer la suspicion avec une épreuve sur route adaptée²

1. Carone (2017) *Applied Neuropsychology: Adult*; **24**(2):160-168

2. Vaucher et al. (2015) *Br J Occup Ther*; 78(2):131-139

Surmonter les résistances – s'approprier la décision

Table 1. Phases of driving cessation and associated challenges and suggested interventions

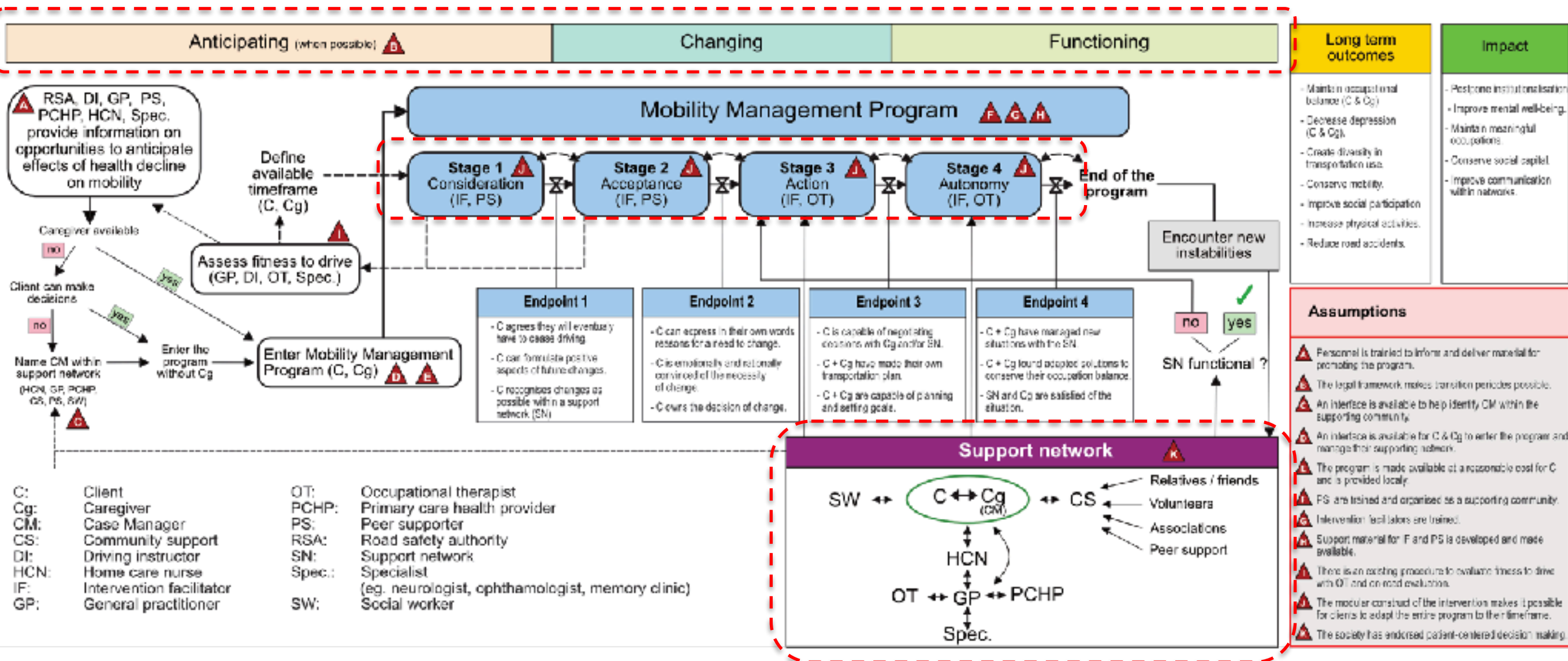
Phases of driving cessation	Challenges	Suggested interventions
Predecision	– A balancing act – Achieving awareness	– Raising awareness about driving safety and driving cessation – Providing general information about alternatives to driving – Sharing experiences of retired drivers – Using a sensitive approach
Decision	– Making the decision – Owning the decision	– Providing specific information regarding the pros and cons of driving cessation – Enabling access to peers and others for advice and support – Assisting with cognitive reframing, maintaining self-efficacy
Post-cessation	– Finding new ways – Coming to terms	– Providing intensive support and education to enable adaptation of lifestyle (for example, problem solving and graded transport experience) – Providing support and using strategies to help with emotional adjustment (for example, life review, cognitive reframing and goal setting)

Liddle et al. *Disability and rehabilitation*. 2011;33(25-26):2574-2586

Author	Design	Population	Intervention	Outcome
Dobbs et al. (2009)	Pseudo-randomised clinical trial	44 participants with dementia in a driving cessation process and 30 caregivers	Driving cessation support group vs. support from the Alzheimer Society	Geriatric depression scale reduction of 2.98 at 16wks in intervention group vs. increase of 1.53 in control (p=0.03)
Gustafsson et al. (2012)	Before – after study	55 older driver who were to consider driving cessation.	UQDRIVE, a group program to promote adjustment to driving cessation for retired and retiring older drivers	The Canadian Occupational Performance Measure (COPM) pre-post changes performance (3.3, p<0.001) and satisfaction (3.0, p<0.001)
Stern et al. (2008)	Three arm parallel randomised clinical trial	66 informal caregivers of individual with cognitive impairment that need to consider driving cessation	4x 2h group psycho-educative sessions vs. written material	BriefCOPE: Driving-Related Self-Efficacy Scale (F(2,60) = 4.42, p < .05) and acceptance (F(2,65) = 3.22, p < .05) and vocalising (F(2,65) = 3.85, p < .05).
Owsley et al. 2004	Parallel randomised clinical trial	403 older drivers with visual acuity deficit or slower visual processing speed.	Safe-transport education program for older drivers (KEYS program) vs. no intervention	Crash risk per 1 million person-miles of travel RR=1.4 (0.92–2.12)
Keay et al. (2013)	Parallel randomised clinical trial (Protocol)	380 drivers aged 75 or older.	KEYS adapted to Australian settings	Driving exposure (GPS) and an accelerometer to detect rapid deceleration events

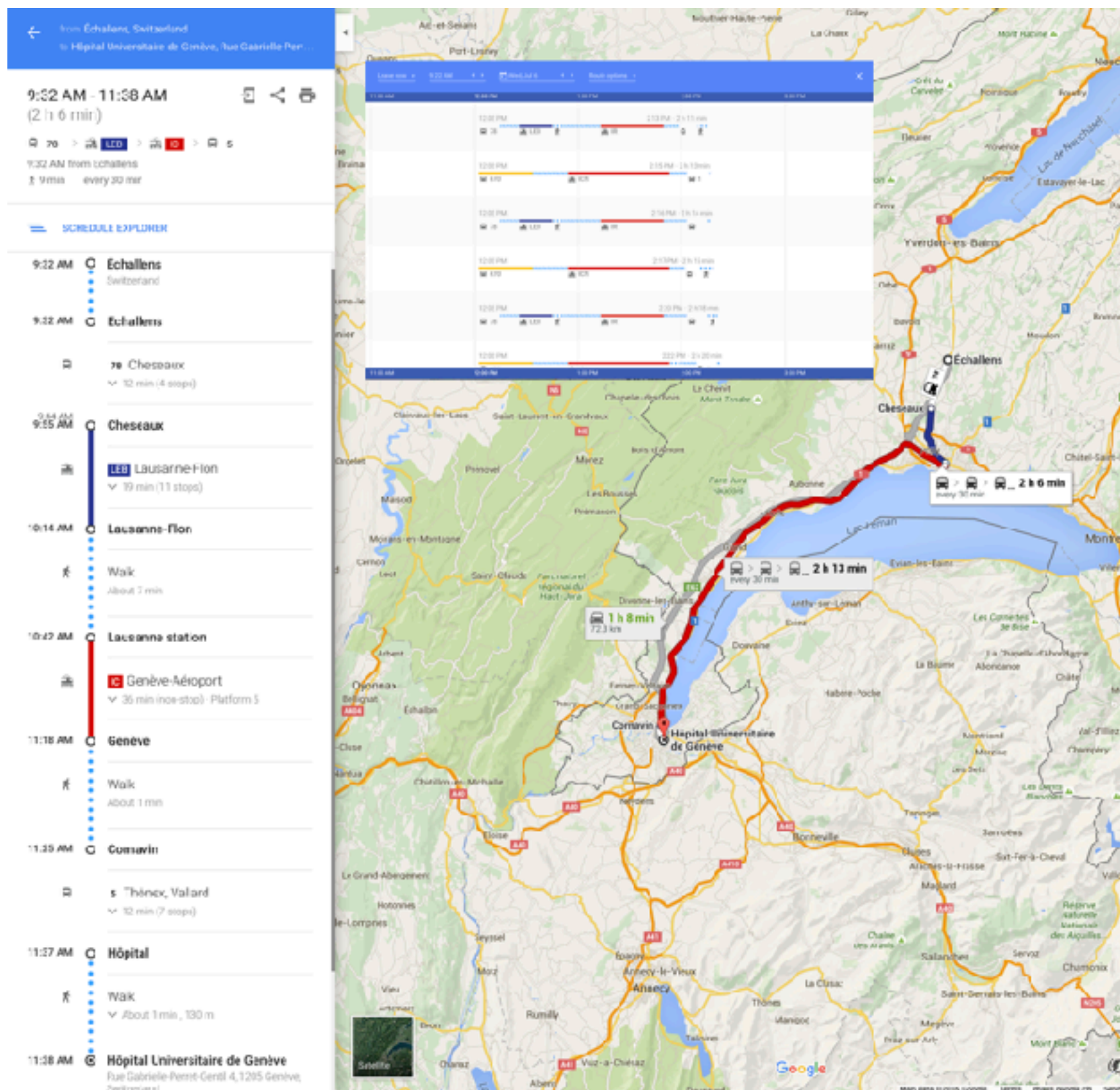
Vaucher et al. (Unpublished)

Découvrir les alternatives – faciliter le transfert du mode de transport



Vaucher et al. (2016), Consensus study report

Surmonter les obstacles – les technologies de com.



Google Maps



L'approche psychologique du changement

Approches comportementales et cognitives
(théories du changement, de l'approche sociale)

- Comprendre les croyances et le problème du patient
- Aider à accepter
(mettre au défi les pensées non-constructives)
- Déterminer des buts

Jepson et al. (2010) *BMC Public Health*; **10**(1):538.

Goal setting – SMART goals

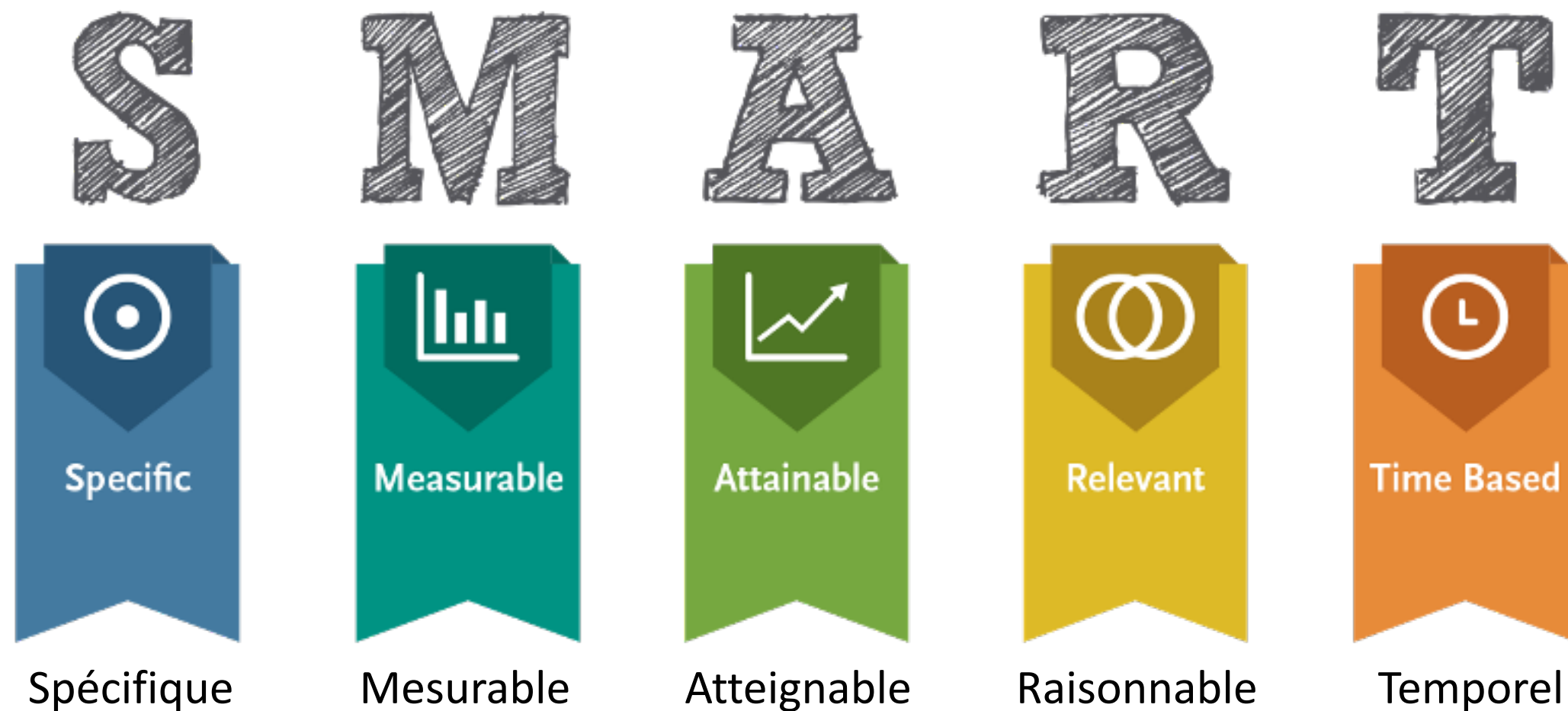
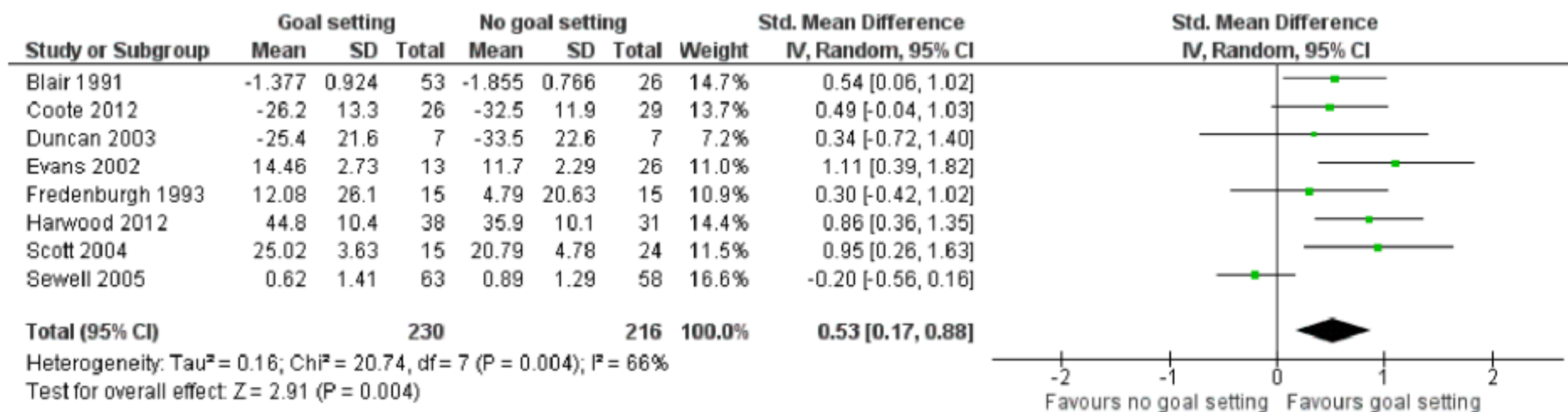


Image from <http://www.j6design.com.au>

Wade (2009) *Clin Rehab*; 23: 291–295

“Goal setting” – Niveau d’évidence

Bénéfices du “goal setting” sur la qualité de vie et le statut émotionnel rapporté par le patient



Levack et al. (2015) *Cochrane Library*; (7) CD009727

À retenir!

<https://blogdotconnect6dotcom.wordpress.com>



Anticiper

<http://community.mystar12.com>



Ecouter

<https://elearningindustry.com>

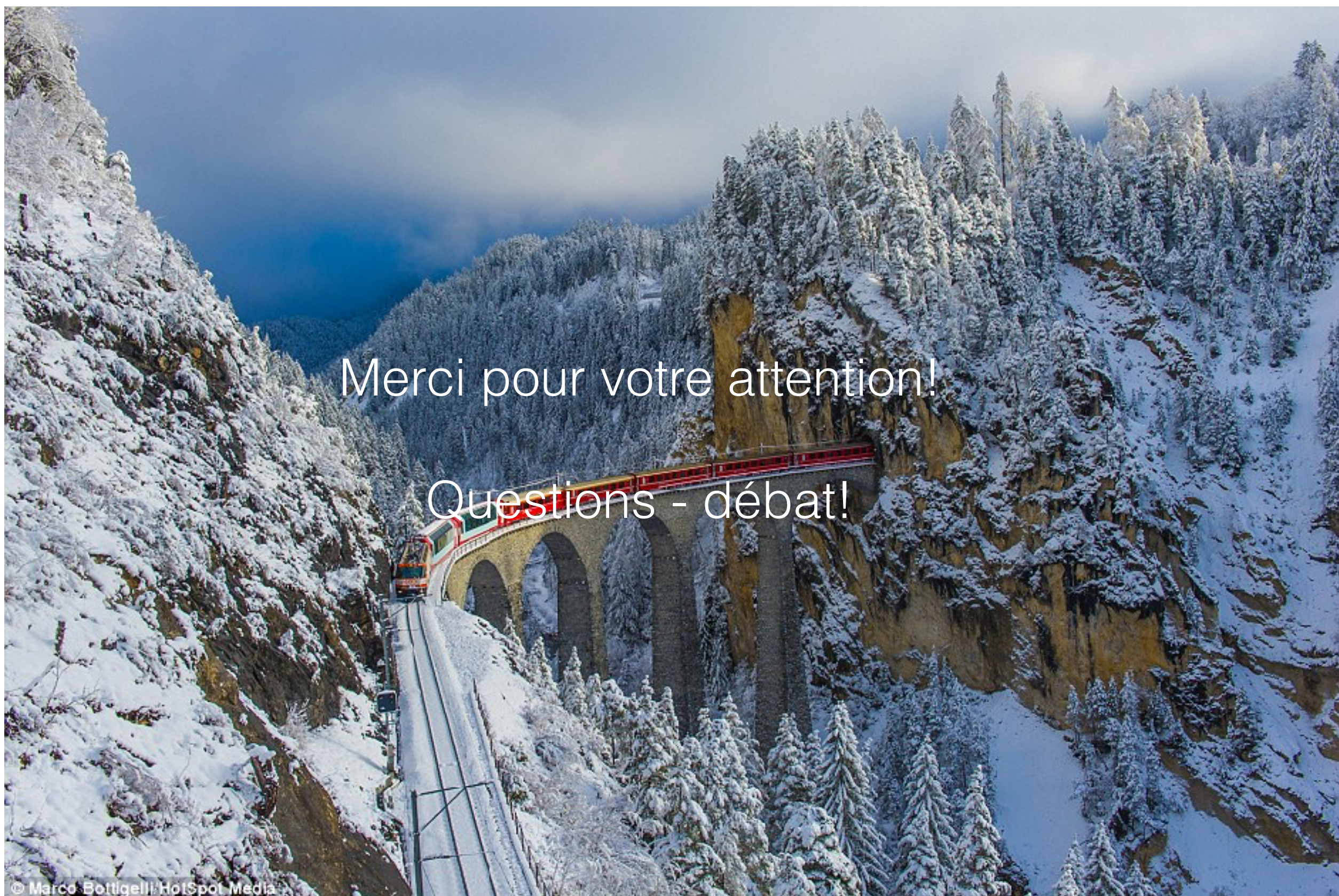


Faciliter

<http://www.blueoceanprinciples.com>



Modifier



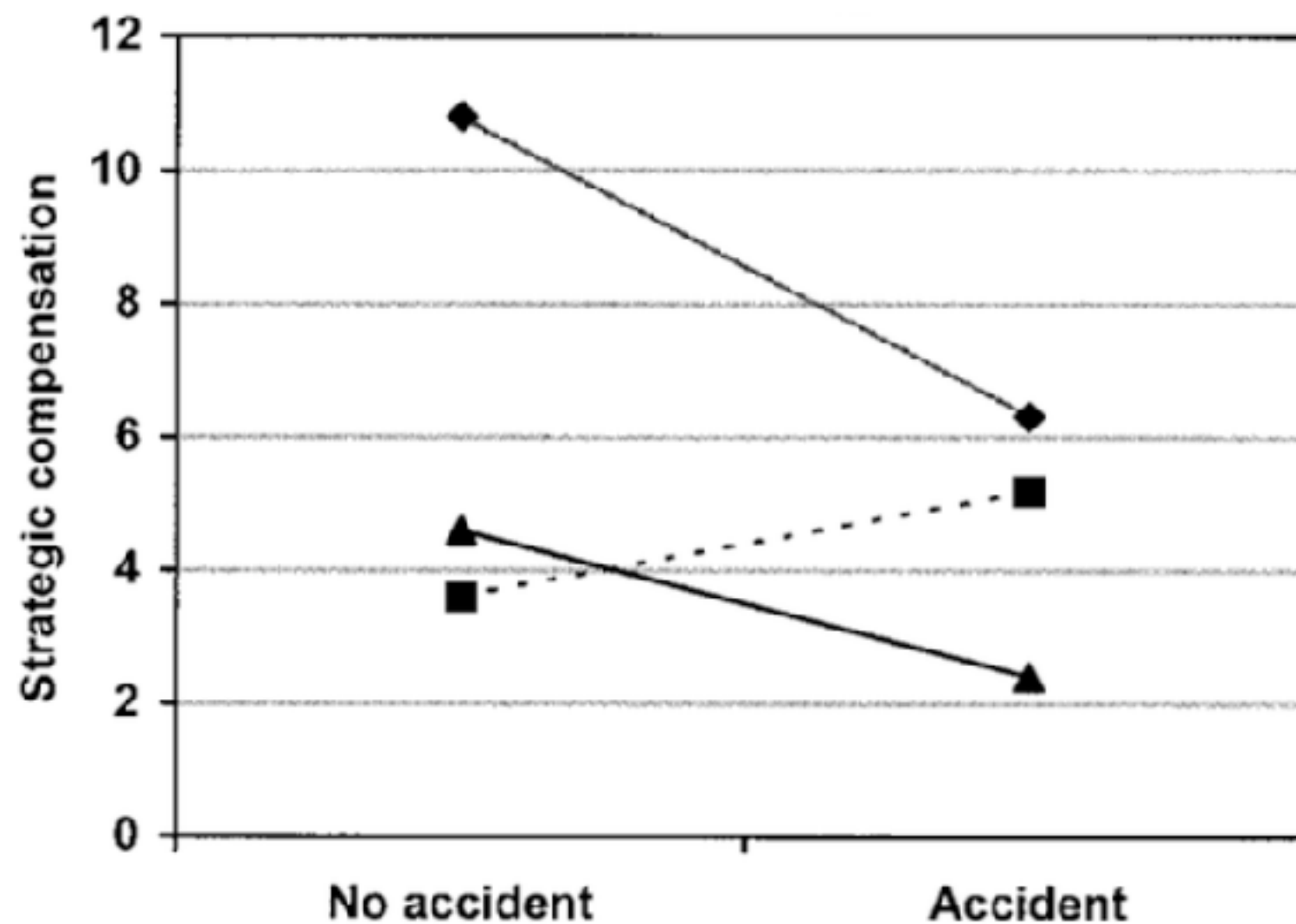


Figure 1. Strategic compensation scores for bad (◆), average (■) and good (▲) drivers with and without a history of accident.