

## **Electronic Supplementary Material**

### **Patient Preference and Adherence**

#### **Methods to assess patient preferences in old age pharmacotherapy – a systematic review**

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**Table S1** Search string (PubMed)

Elderly [tiab] OR community-dwelling [tiab] OR geriatric [tiab] OR “mini-mental state” [tiab] OR mmse [tiab] OR caregivers [tiab] OR falls [tiab] OR Adl [tiab] OR Frailty [tiab] OR Gds [tiab] OR Ageing [tiab] OR elders [tiab] OR Frail [tiab] OR Mci [tiab] OR “cognitive impairment” [tiab] OR “postmenopausal women” [tiab] OR Comorbidities [tiab] OR geriatric assessment [mh] OR Nursing homes [mh] OR frail elderly [mh] OR homes for the aged [mh] OR older [tiab] OR age-related [tiab] OR senior* [tiab]
AND
(patient preference [mh] OR preference* [tiab] OR health outcome priorit* [tiab] OR priorit* [ti])
AND
(drug therapy [MeSH] OR medication [tiab] OR treatment [tiab] OR health state* [tiab] OR therap* [tiab] OR health outcome* [tiab])

**Table S2** Assessment evaluating the methodological quality of the included studies<sup>a</sup>

Question	Criteria for evaluation	Scoring
1. Was a well-defined question in relation to preferences posed in an answerable form?	There is a well-defined research question in relation to preferences, considering key components of the PICOT format (population, intervention, comparator, outcome, timing, and setting).	Yes No
2. Are the characteristics of the participants included in the study clearly described?	Inclusion and/or exclusion criteria for participation in the preference study are transparently reported.	Yes No
2a. Are data in relation to the cognitive status of the participants reported?	The cognitive status of the participants is detailed by reporting the results of a standardized cognitive assessment of the study population OR by reporting the prevalence of medical conditions such as “dementia” or “cognitive impairment” in the study population.	Yes No
2b. Are data in relation to the affective status of the participants reported?	The affective status of the participants is detailed by reporting the results of a standardized mental assessment of the study population OR by reporting the prevalence of a medical condition such as “depression” or “depressive episode” in the study population.	Yes No
3. Are the methods of assessing preferences clearly explained?	The actual preference instrument (including questions and response options) is reported in the text or an appendix or referenced and available elsewhere OR the description of the instrument in the article is detailed enough to understand what kind of material and questions were presented to the participants and what responses were available.	Yes No
4. Are information in relation to the test quality of the preference instrument reported?	Reports information in relation to the test quality (validity, reliability, and comprehensibility) of the respective preference instrument (this includes references to previous studies examining the test quality of the instrument).	Yes No

**Notes:** <sup>a</sup> Questions adapted from:

1. Joy SM, Little E, Maruthur NM, Purnell TS, Bridges JF. Patient preferences for the treatment of type 2 diabetes: a scoping review. *Pharmacoeconomics*. 2013;31(10):877-892.
2. Purnell TS, Joy S, Little E, Bridges JF, Maruthur N. Patient preferences for noninsulin diabetes medications: a systematic review. *Diabetes Care*. 2014;37(7):2055-2062.

**Table S3** Methodological quality of the included studies

Study	1. Study question well-defined	2. Inclusion criteria well-described	2a. Cognitive status reported	2b. Affective status reported	3. Method well explained	4. Test quality reported
Akishita et al. 2013 <sup>62</sup>	Yes	Yes	No	No	Yes	Yes
Baxter et al. 2016 <sup>79</sup>	Yes	Yes	No	No	Yes	Yes
Böttger et al. 2015 <sup>80</sup>	Yes	Yes	Yes	Yes	Yes	Yes
Bowling et al. 2008 <sup>34</sup>	Yes	No	No	No	Yes	Yes
Brown et al. 2008 <sup>35</sup>	Yes	Yes	Yes	Yes	Yes	No
Carpenter et al. 2007 <sup>36</sup>	Yes	Yes	Yes	Yes	No	Yes
Case et al. 2013a <sup>58</sup>	Yes	Yes	Yes	Yes	Yes	Yes
Case et al. 2013b <sup>59</sup>	Yes	Yes	Yes	Yes	Yes (all tools)	Yes (all tools)
Case et al. 2014 <sup>60</sup>	Yes	Yes	Yes	No	Yes (all tools)	Yes (all tools)
Caughey et al. 2017 <sup>63</sup>	Yes	Yes	Yes	No	Yes	Yes
Cherniack et al. 2008 <sup>37</sup>	Yes	Yes	No	No	Yes	No
Chin et al. 2008 <sup>38</sup>	Yes	No	No	Yes	Yes	No
Cline & Mott 2003 <sup>39</sup>	No	Yes	No	No	Yes	Yes
Cranney et al. 2001 <sup>40</sup>	Yes	Yes	No	Yes	Yes	Yes
Danner et al. 2016 <sup>81</sup>	Yes	Yes	No	No	Yes	Yes
de Vries et al. 2015 <sup>88</sup>	Yes	Yes	No	No	Yes	Yes
Decalf et al. 2017 <sup>64</sup>	Yes	Yes	Yes	Yes	Yes	Yes
Extermann et al. 2003 <sup>41</sup>	Yes	Yes	Yes	Yes	Yes	No
Fraenkel et al. 2015 <sup>89</sup>	Yes	Yes	No	No	No	Yes
Fried et al. 2011a <sup>61</sup>	Yes	Yes	Yes	Yes	Yes	Yes
Fried et al. 2011b <sup>65</sup>	Yes	Yes	Yes	Yes	Yes	Yes
Fuller et al. 2004 <sup>42</sup>	Yes	Yes	Yes	No	Yes	Yes
Fyffe et al. 2008 <sup>43</sup>	Yes	Yes	Yes	Yes	Yes	Yes
Girones et al. 2012 <sup>66</sup>	Yes	No	Yes	Yes	No	Yes
Gum et al. 2010a <sup>82</sup>	Yes	Yes	No	Yes	Yes	Yes
Gum et al. 2010b <sup>83</sup>	Yes	Yes	Yes	Yes	Yes	Yes
Hamelinck et al. 2016 <sup>90</sup>	Yes	Yes	Yes	Yes	Yes	Yes

Study	1. Study question well-defined	2. Inclusion criteria well-described	2a. Cognitive status reported	2b. Affective status reported	3. Method well explained	4. Test quality reported
Holbrook et al. 2007 <sup>44</sup>	Yes	Yes	Yes	No	Yes	Yes
Jimenez et al. 2012 <sup>67</sup>	Yes	Yes	Yes	Yes	Yes	No
Junius-Walker et al. 2011 <sup>68</sup>	Yes	Yes	Yes	Yes	Yes	Yes
Junius-Walker et al. 2012 <sup>69</sup>	Yes	Yes	Yes	Yes	Yes	Yes
Junius-Walker et al. 2015 <sup>70</sup>	Yes	Yes	Yes	Yes	Yes	Yes
König et al. 2014 <sup>84</sup>	Yes	Yes	Yes	No	Yes	Yes
Landreville et al. 2001 <sup>45</sup>	Yes	Yes	No	Yes	Yes	Yes
Luck-Sikorski et al. 2017 <sup>71</sup>	Yes	Yes	Yes	Yes	Yes	No
Mandelblatt et al. 2010 <sup>72</sup>	Yes	Yes	Yes	No	Yes	Yes
Man-Son-Hing et al. 2000 <sup>46</sup>	Yes	Yes	No	No	Yes (both tools)	Yes (both tools)
Miller et al. 1998 <sup>31</sup>	Yes	Yes	Yes	No	Yes	No
Mohlman 2012 <sup>73</sup>	Yes	No	No	Yes	Yes	Yes
Mueller et al. 2016 <sup>85</sup>	Yes	Yes	No	No	Yes	Yes
Murphy et al. 2002 <sup>47</sup>	Yes	Yes	Yes	Yes	Yes	Yes
Muth et al. 2016 <sup>53</sup>	No	Yes	Yes	Yes	Yes	No
Nyman et al. 2005 <sup>48</sup>	Yes	Yes	No	No	No	Yes
Perret-Guillaume et al. 2011 <sup>74</sup>	Yes	Yes	Yes	Yes	Yes	Yes
Pfisterer et al. 2007 <sup>49</sup>	Yes	Yes	Yes	No	Yes	Yes
Protheroe et al. 2000 <sup>50</sup>	Yes	Yes	No	No	Yes	No
Raue et al. 2011 <sup>75</sup>	Yes	Yes	Yes	Yes	Yes	Yes
Rochon et al. 2014 <sup>76</sup>	Yes	Yes	No	No	Yes	Yes
Schnabel et al. 2014 <sup>54</sup>	No	Yes	No	No	Yes	No
Schonberg et al. 2014 <sup>55</sup>	No	Yes	Yes	No	Yes	No
Silverman et al. 2013 <sup>77</sup>	Yes	Yes	No	Yes	Yes (both tools)	Yes (both tools)
Sudlow et al. 1998 <sup>32</sup>	Yes	Yes	Yes	No	Yes	No
Tinetti et al. 2008a <sup>51</sup>	Yes	Yes	Yes	No	Yes	Yes
Tinetti et al. 2008b <sup>52</sup>	Yes	Yes	Yes	Yes	Yes	Yes
Uemura et al. 2016 <sup>86</sup>	Yes	Yes	No	No	Yes	Yes

<b>Study</b>	<b>1. Study question well-defined</b>	<b>2. Inclusion criteria well-described</b>	<b>2a. Cognitive status reported</b>	<b>2b. Affective status reported</b>	<b>3. Method well explained</b>	<b>4. Test quality reported</b>
van Summeren et al. 2016 <sup>57</sup>	Yes	Yes	Yes	No	Yes	Yes
van Summeren et al. 2017 <sup>56</sup>	Yes	Yes	Yes	No	Yes	Yes
Vennedey et al. 2016 <sup>87</sup>	Yes	Yes	No	No	Yes	Yes
Voigt et al. 2010 <sup>78</sup>	Yes	Yes	Yes	Yes	Yes	Yes
Yellen et al. 1994 <sup>33</sup>	Yes	No	No	No	Yes	No