

# Adaptation and Validation of the Screening Tool of Older People's Prescriptions Instrument for the Indonesian Population

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**ABSTRACT**

**Objective:** In this study, we aimed to prepare and validate an Indonesian version for the Screening Tool of Older People's Prescriptions (STOPP), which is an instrument to identify inappropriate medications for elderly patients.

**Methods:** The Indonesian version of STOPP (STOPP\_INA) was developed using modified transcultural adaptation guidelines from the American Academy of Orthopedic Surgeons. Our method consisted of translating original STOPP into Indonesian (forwardly translation), synthesis of forward translation, translation into English and synthesis of back translation, a review by the copyright holder of STOPP, a review by the expert team, pretest, revision of STOPP\_INA, field test, and psychometric analysis of the final version of the questionnaire. The study design for this part was quasi-experimental with purposive sampling for members of the translator's team, expert's team, and respondents in the pretest, but they were different from field testing that used purposive and postsurvey sampling for respondents. Content validity and face validity were used to construct the validity of STOPP\_INA by assessing item-level content validity and correlation between items and total values. Internal consistency was measured with Cronbach's alpha coefficient.

**Findings:** The expert panel agreed on a list of 81 criteria. Five (62.50%) of expert team members agreed and could be continued to the field test without revision of STOPP\_INA and 3 (37.50%) agreed with a revision. The research subjects in the psychometric test had 230 respondents, 5 (2.17%) resigned, with an average of item-level content validity index of 0.99. The construct validity analysis showed that 5-item criteria are "not valid," namely in A1, A3, B7, B10, and C3. Reliability analysis showed the Cronbach's Alpha and Cronbach's Alpha Based on Standardized Items were 0.978 and 0.979.

**Conclusion:** The expert team was agreed on 81 criteria (100%) of adaptation of STOPP version 2 criteria. There were 5 criteria that not valid statistically, they could not be removed from the instrument because they can influence content and construct of the instrument. The STOPP\_INA has been developed for the Indonesian population, currently being tested in clinical practice against elderly patients undergoing hospitalization.

**KEYWORDS:** Elderly population, inappropriate medications, Indonesia, prescription, screening tool, transcultural adaptation, validation

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## INTRODUCTION

In 2014, the prevalence of morbidity for the elderly in Indonesia reached 25.05%, and 66.01% of them consumed medicines.<sup>[1]</sup> A change and decrease in various physiological, hormonal, and organ functions could result with increasing age. This caused susceptibility

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the body to disease. The ageing process in the elderly also resulted in changes in body composition, pharmacokinetic and pharmacodynamics that could increase sensitivity to certain drugs.<sup>[2,3]</sup>

Multimorbidity and the use of large amounts of medicines caused potentially inappropriate medications (PIM), polypharmacy,<sup>[4]</sup> hospitalization, adverse drug reactions,<sup>[5,6]</sup> and fall in elderly patients.<sup>[7,8]</sup> This resulted in an increase of treatment costs.<sup>[9]</sup> An effort to reduce the use of inappropriate drugs was by providing clinical guidance through the development of explicit treatment criteria because it will benefit practitioners in providing the best care for patients according to the latest evidence and giving an assurance of health for patients.<sup>[10,11]</sup> Some instruments have been developed in various countries, one of which was the Screening Tool of Older Persons' Prescriptions (STOPP) and the Screening Tool to Alert Doctors to Right Treatment (START) criteria. The STOPP/START criteria were developed in Ireland and the United Kingdom in 2008 and revised in 2014.<sup>[12,13]</sup> The STOPP/START instrument was validated using the Delphi method by 20 expert team members.<sup>[13]</sup>

The identification of appropriate medications in elderly patients was critically important because they were susceptible to diseases.<sup>[1]</sup> STOPP had been used in several studies in Indonesia<sup>[6,14]</sup> but was never adapted to Indonesian. At present, Indonesia does not have instruments yet that function the same as STOPP. Therefore, it was necessary to develop an instrument for identifying inappropriate medications to the Indonesian version (STOPP\_INA). This study aimed to adapt the English version of STOPP to Indonesian culture and to measure the validity and reliability of the instrument. The development of the instrument was carried out through the adaptation process of the STOPP version 2 criteria. The questions in this study are: was STOPP version 2 adaptation in Bahasa Indonesia acceptable? Was the STOPP\_INA valid and reliable as an instrument of the identifier inappropriate medications in elderly patients?

## METHODS

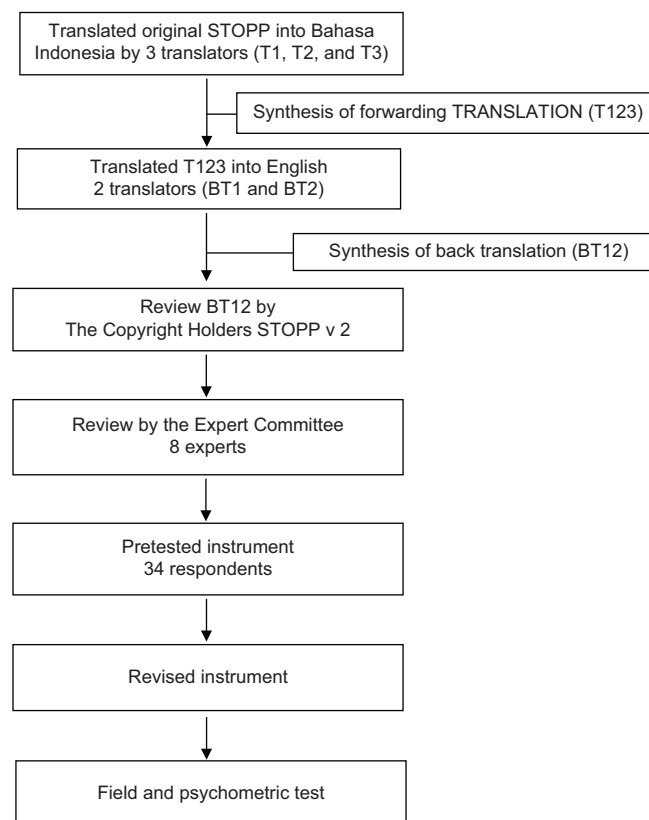
The adaptation of the STOPP version 2 criteria got permission from Denis O'Mahony as the copyright holder and ethical clearance from the Ethics Committee of the Faculty of Medicine, The University of Indonesia (No. KET-850/UN2.F1/ETIK/PPM.00.02/2019). Informed consent was given to subjects before participating. The research was conducted on a multicenter of Indonesian hospitals.

The STOPP consisted of 81 criteria which were grouped into 13 sections such as A: Indications of

the drug (A1–3); B: Cardiovascular system (B1–13); C: Coagulation System (C1–11); D: Central nervous system (D1–14); E: Renal system (E1–6); F: Gastrointestinal system (F1–4); G: Respiratory system (G1–5); H: Musculoskeletal system (H1–9); I: Urogenital system (I1–2); J: Endocrine system (J1–6); K: Medications that are predicted to increase the risk of falls (K1–4); L: Analgesic medicine (L1–3); and M: Antimuscarinic/anticholinergic drugs (M1).<sup>[13]</sup>

The adaptation of the STOPP was developed with the cross-cultural adaptation guidelines from the American Association of Bone Surgeons Committee.<sup>[15]</sup> The prose stage consisted of translation of the original STOPP into Indonesian language (forward translated), synthesis of forward translation, back translation into English, synthesis of back translation, a review from the copyright holder of STOPP, a review by the expert team, pretest, revision of STOPP\_INA, field test, and psychometry of the final version of the questionnaire.<sup>[16]</sup>

Translation of STOPP (forward and back translation) involved 5 translators. They were independent translators, didn't know each other, were fluent in Indonesian and English and had different scientific backgrounds. The synthesis of the forward translation and back translation was undertaken by the researcher and translators through confirmation and discussion for the differences of



**Figure 1:** Flowchart of adaptation of instrument in the Indonesian version

meanings. Each correction of translation was recorded as data in the translation process. The stage of adaptation of instrument is presented as follows: [Figure 1].

The questionnaire was presented in a paper format with two choices, namely: “agree” if the statement was relevant and “disagree” if it was not relevant. The papers were sent to members of the expert team for initial reviewing, followed by an expert panel, and were sent back to review more. The composition of this expert team consisted of two geriatricians, one pharmacologist, one endocrinologist, one cardiologist, one neurologist, one clinical pharmacist, and one linguist who was also a translator member. They were assessed using three feasibility options, namely: 1 = “the instrument could be used to testing without revision,” 2 = “could be used to testing with revision,” and 3 = could not be used to testing. The study design in the pretest was a quasi-experimental study with the test–retest method. Respondents were pharmacists who met the inclusion and exclusion criteria and were chosen using a purposive sampling technique in March 2019. The minimum number of the needed subjects was 30 respondents.<sup>[15]</sup> Eligible participants of the study were hospital pharmacists, who served in pharmaceutical care for >1-year, from secondary or tertiary hospitals in Indonesia, and were willing to be respondents in this study. Hospital pharmacists who served in managerial pharmacy or served outside the hospital pharmacy installation were excluded. Respondents completed the paper of our self-administered questionnaire, which consisted of sheets of informed consent, demographic characteristics, STOPP\_INA paper, and an opinion form. The STOPP\_INA was presented in five Likert scales: 1 = “strongly disagree,” 3 = “don’t know,” and 5 = “strongly agree.”

The design of this part of our study was quasi-experimental with the one-shot method. The data were taken using a purposive sampling technique through survey post in July–October 2019. Respondents were a pharmacist who required of the inclusion and exclusion criteria, such as pretest respondent qualification. The minimum needed subjects were 220 respondents at a

significance level of 95% ( $d = 0.05$ ) and proportion (P) 80%.<sup>[17]</sup> Respondents completed a questionnaire paper that consisted of informed consent, demographic characteristics, and a final STOPP\_INA which were obtained in four Likert scales, 1 = “strongly disagree” and 4 = “strongly agree.”

We used the IBM® SPSS® Statistics, International Business Machiner Corp. version 22.0 for data analysis, and a  $P < 0.05$  was considered statistically significant. The data analysis was presented qualitatively for the modified criteria. Descriptive analysis was presented as a percentage (%). The demographic characteristics of respondents with mean  $\pm$  standard deviation, the content validity and face validity with an average of item-level content validity index (I-CVI/ave), and internal consistency form pretest data. The construct validity and reliability were tested and reported with a Pearson correlation and Cronbach’s alpha coefficient.<sup>[18,19]</sup>

## RESULTS

There were 30 (37.04%) of 81 criteria that gave different meanings in the translation process. An overview of the needed modifications of items of the STOPP questionnaire is presented in Table 1. The instrument feasibility assessment showed that 5 (62.50%) expert team members agreed to be continued the field test without revision and 3 (37.50%) expert team members agreed to be continued the field test with the revision.

I-CVI values were  $>0.7$  for each item and an I-CVI/ave value was 0.99.<sup>[20]</sup>

The total number of subjects at the pretest stage was 34 respondents. The basic characteristics of respondents are presented in Table 2. The internal consistency showed that 14-item criteria were not relevant. Therefore, a retest was carried out on these items. The internal consistency of the first test and retest is presented in Table 3.

In the field test stage, respondents were pharmacists from 320 hospitals in Indonesia and obtained 230 (71.88%) respondents. Five respondents did not complete the questionnaire, and the characteristics of respondents are

**Table 1: Overview of adaptation of the Screening Tool of Older People’s Prescriptions version 2 instrument to the Indonesian language**

Modification type	Expert team review	Criterion	Type of equalization
Use of specific words	The term was more commonly used in medicine Causing the wrong meaning with the word “blocker” or vice versa	A3, B3, IB4, B5, B11, B12, C3-11, D4, F2, H8, I2, and J3	Semantic, idiomatic, conceptual
Remove the name of the drug from the criteria	Medicine is not available in Indonesia	B10, D3, J1, K4, and L1	Experiential, conceptual
Rewrite and use specific words	The term was more commonly used in medicine	B13 and D11	Semantic, idiomatic, conceptual
Add information	Except for glimepiride	J1	Experiential, conceptual

**Table 2: Basic demographic characteristics of respondents**

Characteristics	Pretesting (n=34)	Field test (n=230)
The region		
Regional 1	34 (100.00)	135 (58.69)
Regional 2	0 (0.00)	47 (20.61)
Regional 3	0 (0.00)	29 (12.72)
Regional 4	0 (0.00)	4 (1.75)
Regional 5	0 (0.00)	15 (6.58)
Hospital level		
Tertiary hospital	0 (0.00)	28 (12.17)
Secondary hospital	34 (100.00)	222 (97.37)
Gender		
Male	5 (14.70)	38 (16.67)
Female	29 (85.30)	192 (83.47)
Age (years)		
20-30	11 (32.36)	124 (54.39)
31-40	16 (47.06)	80 (34.78)
41-50	6 (17.65)	23 (10.00)
>50	2 (5.88)	3 (1.32)
Last education		
Pharmacist	29 (85.30)	194 (85.09)
Magister of pharmacy	5 (14.70)	36 (15.65)
Time of duty in the pharmaceutical service (years)		
>1	6 (17.65)	65 (28.51)
2-5	8 (23.53)	79 (34.65)
5-10	13 (38.23)	51 (22.37)
>10	8 (23.53)	35 (15.22)

Data are expressed in n (%). Regional 1=Banten, DKI Jakarta, West Java, Central Java, East Java, DI Yogyakarta, Regional 2=West Sumatra, Riau, South Sumatra, Lampung, Bali, West Nusa Tenggara, Regional 3=Nanggroe Aceh Darussalam, North Sumatra, Jambi, Bengkulu, Riau Islands, North Sulawesi, Central Sulawesi, Southeast Sulawesi, Gorontalo, West Sulawesi, South Sulawesi, Regional 4=South Kalimantan, Central Kalimantan, Regional 5=Bangka Belitung, East Nusa Tenggara, East Kalimantan, North Kalimantan, Maluku, North Maluku, Papua, West Papua

presented in Table 2. A mean score of each item criterion was more than 3 points, except for Item\_1 ( $2.86 \pm 0.95$ ), Item\_2 ( $2.86 \pm 0.89$ ), and Item\_10 ( $2.96 \pm 0.73$ ). The construct validity was 5-item criteria that were "not valid," namely in Item\_1/A1 ( $r = 0.262$ ;  $P = 0,000$ ), Item\_3/A3 ( $r = 0.423$ ;  $P = 0,000$ ), Item\_10/B7 ( $r = 0.401$ ;  $P = 0,000$ ), Item\_13/B20 ( $r = 0.373$ ;  $P = 0,000$ ), and Item\_19/C3 ( $r = 0.442$ ;  $P = 0,000$ ). The Cronbach's alpha was 0.978 and Cronbach's alpha based on standardized items was 0.979.

## DISCUSSION

This study used a different validation method from the study of Luz *et al.* and Samaranayake *et al.* They used the Delphi two-round method.<sup>[21,22]</sup> The forward translation process involved three translators, one translator was an educator who understood pharmacy and clinical pharmacy well, and the other two were educators who were experts in the languages and cultures of both countries (English and Indonesian). It aimed to get the right word selection and reduce the ambiguous meanings, so produced a better instrument equivalence.<sup>[15]</sup> Our study also conducted a review of the results of the back translation obtained from the authorities, which provides corrections to 5 criteria related to the replacement of terms, an affirmation of statements in sentences, replacement of words, improvement of wording, and an affirmation of subgroups of drugs. This process aimed to reduce errors in translation results, correct sentences to be easily understood, and assess the quality of translations with the original version.<sup>[23]</sup>

The expert team review stage begun with the submission of the manuscript, to be reviewed every for all item in

**Table 3: Internal consistency of the first test and retest of 14-item criteria**

Criteria	First test		Retest	
	Corrected item-total correlation	Cronbach's alpha if item deleted	Corrected item-total correlation	Cronbach's alpha if item deleted
Item_8 (B5)	0.383	0.982	0.807	0.962
Item_9 (B6)	0.266	0.982	0.830	0.961
Item_17 (C1)	0.353	0.982	0.867	0.960
Item_18 (C2)	0.400	0.982	0.812	0.961
Item_19 (C3)	0.419	0.982	0.787	0.962
Item_20 (C4)	0.360	0.982	0.838	0.961
Item_26 (C10)	0.415	0.982	0.715	0.964
Item_39 (D12)	0.252	0.982	0.867	0.960
Item_40 (D13)	0.345	0.982	0.771	0.962
Item_41 (D14)	0.394	0.982	0.776	0.963
Item_59 (H4)	0.400	0.982	0.804	0.962
Item_61 (H5)	0.393	0.982	0.776	0.962
Item_79 (L2)	0.375	0.982	0.864	0.960
Item_81 (M1)	0.337	0.982	0.729	0.963

STOPP\_INA and responded in writing; forming panels, to share their opinions and opinions with one another; and sending the text of the reconciliation results from any difference of opinion in the panel, to be reviewed and responded to in writing. This process was carried out to obtain semantic equality, idiomatic equality, experiential equality, and conceptual equality between STOPP\_INA instruments and the original version.<sup>[23]</sup> The description of the field test respondents showed that the data collection was quite good.

Data were obtained from regional 1 to regional 5, which means that it could represent the entire territory of Indonesia. Respondents' assessment of STOPP\_INA used four Likert scales. This aimed to eliminate the answer to the middle value, which is "don't know."

The measurement of content validity in this study was obtained from qualitative and quantitative measurements. Qualitative measurements resulted from the consideration of the expert team (validity by assumption),<sup>[24]</sup> which resulted in a modification in the STOPP criteria as in Table 1. Quantitative measurements were obtained from two subjects, namely from the expert team and respondents in the pretest stage. The content validity of the expert team review was measured with the I-CVI and the I-CVI/ave value, which means that there was a match between each measurement item with the contents of the measured variable.<sup>[20,24]</sup>

The content validity of the pretest respondents was measured using correlation between test factors<sup>[24]</sup> that 14 items had a low conformity with a correlation value  $<0.45$ ,<sup>[25]</sup> which means that they had a low alignment and consistency of items to the instrument.<sup>[26]</sup> Therefore, these items were retested at the same respondent to improve internal consistency. The face validity qualitatively showed that a correlation was obtained from the reviews and opinions of the expert team, related to the consistency of the style and format of the writing, while from respondents in the pretest stage, related to the readability and clarity of the language, not confusing, unambiguous, a sentence was not too long or too short.<sup>[24,27]</sup> Quantitative measurements were obtained from descriptive eligibility both from the expert team and from pretest respondents, which showed that the instrument could be accepted.

The construct validity qualitatively ("validity by assumption") was obtained from content validity and face validity, which results in a modification of STOPP\_INA before field testing.<sup>[24]</sup> The quantitative, carried out empirically using field test data, through measurement of internal consistency (Cronbach's alpha), Item to Total items correlations, Inter-Item Correlation, Cronbach's Alpha if Item Deleted.<sup>[26]</sup> The reliability test analysis

showed a high value of internal consistency degree for each item and all items in the instrument, which means that the STOPP\_INA instrument was reliable for repeated measurements. Based on the item's correlation value to the total Item it shows 5 Item "not valid" criteria because it gave a correlation value  $<0.45$ .<sup>[25]</sup> Their item showed a low correlation value to other items, as in Item\_1 (A1) with each item in the instrument, except for Item\_2 (A2), while in Item\_3 (A3), Item\_10 (B7), Item\_13 (B13), and Item\_19 (C3), each has a low correlation with each other item. Therefore, they could be considered to be removed from the STOPP\_INA instrument. Criteria of "not valid" did not remove from the instrument because they have related to other criteria, even though removing the criteria could increase the Cronbach's alpha significantly. This was being caused by some matter, among others: in criterion A1, had an incomplete sentence. The correction was an inserting the word "and" in-between words "indications based"; in criterion A3, had no relevance between the sentence of a statement and an explanation. The correction was a changing word "a new drug" became "other drugs of the same class/group"; in criterion B7, had been influenced ability and experience of respondents in clinical practice of geriatric care. In old age, oedema can occur due to poor circulation (sitting too often), so causing a buildup of fluid in the lower body, especially at the ankles and feet. The correction was a using of criterion that had been agreed by the expert team; in criterion B10, had an imperfection of sentence order. The correction was an inserting of explanation sentence before the word "except"; in criterion C3: had not given the name of medicines. The correction of C3 was an adding of the name of medicines. The Adaptation and validation of STOPP version 2 for Indonesian population could be accepted 81 criteria (100.00%), was different from the STOPP-START adaptation study for the Sri Lanka population that had been rejected 8% item of original instruments.<sup>[22]</sup>

The Indonesian version of STOPP criteria has been developed. We hope the instrument can be used in clinical practice and research on medication among the elderly. Currently, the STOPP\_INA are being tested in clinical practice against elderly patients undergoing hospitalization for ensuring the capability of the instrument as a tool of identification PIM. The final adapted and validated version of the questionnaire is available online in the journal's website as a Supplement Table 1.

## AUTHORS' CONTRIBUTION

All authors contributed to the design, the questionnaire developing, data collection, and analysis. All authors

participated in the editing, reviewing, and approval of the final version of the manuscript.

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### Conflicts of interest

There are no conflicts of interest.

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**Supplement Table 1: The original Screening Tool of Older People's Prescriptions questionnaire and the Indonesian version**

Pharmacological STOPP version 2 (original) class			Kelas farmakologi	STOPP_INA (the Indonesian versions of STOPP)
Part A: Drug indication criteria			Bagian A: Kriteria indikasi obat	
1	A1	Any drug prescribed without an evidence-based clinical indication	1	A1 Setiap obat yang diresepkan tanpa indikasi berbasis bukti yang kuat
2	A2	Any drug prescribed beyond the recommended duration, where treatment duration is well defined	2	A2 Peresepan obat yang melebihi jangka waktu pemberian yang dianjurkan, sedangkan durasi pengobatan telah ditetapkan dengan baik
3	A3	Any duplicate drug class prescription e.g., two concurrent NSAIDs, SSRIs, loop diuretics, ACE inhibitors, anticoagulants (optimization of monotherapy within a single-drug class should be observed prior to considering a new agent)	3	A3 Peresepan beberapa obat secara bersamaan dari kelas terapi yang sama (misalnya golongan OAINS, SSRI, diuretik kuat/ <i>diuretic loop</i> , penghambat ACE, atau antikoagulan). (Pemberian terapi tunggal harus dipertimbangkan, sebelum memberikan obat lain dari kelas obat yang sama)
Part B: Cardiovascular system criteria			Bagian B: Kriteria sistem kardiovaskular	
4	B1	Digoxin for heart failure with normal systolic ventricular function (no clear evidence of benefit)	4	B1 Digoksin untuk gagal jantung dengan fungsi sistolik ventrikel normal (Tidak ada bukti manfaat yang jelas)
5	B2	Verapamil or diltiazem with NYHA Class III or IV heart failure (may worsen heart failure)	5	B2 Verapamil atau diltiazem pada pasien gagal jantung NYHA* Kelas III atau IV (Dapat memperburuk gagal jantung) *NYHA
6	B3	Beta-blocker in combination with verapamil or diltiazem (risk of heart block)	6	B3 Penyekat beta/beta blocker dikombinasikan dengan verapamil atau diltiazem (Meningkatkan risiko blok AV*/heart block) Blok AV (penyekatan atrioventricular) Contoh: Metoprolol, nebivolol, propranolol, carvedilol, bisoprolol, labetalol
7	B4	Beta-blocker with bradycardia (<50/min), type II heart block, or complete heart block (risk of complete heart block, asystole)	7	B4 Penyekat beta pada pasien dengan bradikardi (<50/menit), blok AV Tipe II, atau blok AV total (Meningkatkan risiko blok AV/heart block)
8	B5	Amiodarone as first-line antiarrhythmic therapy in supraventricular tachyarrhythmias (higher risk of side effects than beta-blockers, digoxin, verapamil, or diltiazem)	8	B5 Amiodarone sebagai lini pertama terapi anti-aritmia pada takiaritmia supraventrikel (Risiko efek samping lebih tinggi dibandingkan penyekat beta, digoksin, verapamil atau diltiazem)
9	B6	Loop diuretic as first-line treatment for hypertension (safer, more effective alternatives available)	9	B6 Diuretik kuat/loop diuretic sebagai lini pertama terapi hipertensi (Tersedia alternatif yang lebih aman dan efektif)
10	B7	Loop diuretic for dependent ankle edema without clinical, biochemical evidence or radiological evidence of heart failure, liver failure, nephrotic syndrome, or renal failure (leg elevation and/or compression hosiery usually more appropriate)	10	B7 Diuretik kuat/ <i>Loop diuretic</i> untuk pasien dengan edema tungkai tanpa bukti klinis/biokimia atau radiologis adanya gagal jantung, gagal hati, sindroma nefrotik atau gagal ginjal. (Mengangkat tungkai dan/atau penggunaan stoking kompresi lebih tepat).
11	B8	Thiazide diuretic with current significant hypokalemia (i.e., serum K <sup>+</sup> <3.0 mmol/l), hyponatremia (i.e., serum Na <sup>+</sup> <130 mmol/l) hypercalcemia (i.e., corrected serum calcium >2.65 mmol/l) or with a history of gout (hypokalemia, hyponatremia, hypercalcemia, and gout can be precipitated by thiazide diuretic)	11	B8 Diuretik tiazid disertai gejala hipokalemia (serum K <sup>+</sup> <3.0 mmol/l), hiponatremia (serum Na <sup>+</sup> <130 mmol/l), hiperkalsemia (misal serum kalsium >2.65 mmol/l), atau dengan riwayat penyakit asam urat/pirai/gout. Diuretik tiazid memperberat hipokalemia, hiponatremia, hiperkalsemia, dan penyakit pirai. Contoh: hidroklorothiazide, benzthiazide, clopamide
12	B9	Loop diuretic for treatment of hypertension with concurrent urinary incontinence (may exacerbate incontinence)	12	B9 Diuretik kuat/loop diuretic untuk pengobatan hipertensi disertai inkontinensia urin (Dapat memperburuk inkontinensia urin)

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Pharmacological STOPP version 2 (original) class		Kelas farmakologi	STOPP_INA (the Indonesian versions of STOPP)
Part B: Cardiovascular system criteria		Bagian B: Kriteria sistem kardiovaskular	
13	B10 Centrally acting antihypertensives (e.g., methyl dopa, clonidine, moxonidine, rilmenidine, and guanfacine), unless clear intolerance of, or lack of efficacy with, other classes of antihypertensives (centrally active antihypertensives are generally less well tolerated by older people than younger people)	13	B10 Antihipertensi kerja sentral (misalnya metildopa, klonidin, monoksidin, rilmenidin, dan guanfasin), kecuali golongan antihipertensi lain kurang efektif. (Antihipertensi kerja sentral kurang dapat ditoleransi oleh pasien usia lanjut).
14	B11 ACE inhibitors or angiotensin receptor blockers in patients with hyperkalemia	14	B11 Penghambat ACE atau penyekat reseptor angiotensin pada pasien hiperkalemia (Berisiko memperparah hiperkalemia)
15	B12 Aldosterone antagonists (e.g., spironolactone and eplerenone) with concurrent potassium-conserving drugs (e.g., ACEIs, ARBs, amiloride, and triamterene) without monitoring of serum potassium (risk of dangerous hyperkalemia, i.e., >6.0 mmol/l - serum K should be monitored regularly, i.e., at least every 6 months)	15	B12 Penggunaan antagonis aldosteron (misalnya, spironolakton, dan eplerenon) bersamaan dengan obat hemat kalium (misalnya, penghambat ACE, ARB, amilorid, dan triamteren), tanpa monitoring serum kalium (Berisiko memperberat hiperkalemia, yaitu kadar serum K <sup>+</sup> >6.0 mmol/L, sebaiknya dimonitor secara rutin setiap 6 bulan) *ARB (angiotensin II reseptor blockers)/penyekat reseptor angiotensin II
16	B13 Phosphodiesterase type 5 inhibitors (e.g., sildenafil, tadalafil, and vardenafil) in severe heart failure characterized by hypotension, i.e., systolic BP <90 mmHg, or concurrent nitrate therapy for angina (risk of cardiovascular collapse)	16	B13 Penghambat Fosfodiesterase Tipe 5 (misalnya sildenafil, tadalafil, dan vardenafil) pada gagal jantung berat, yang ditandai dengan hipotensi (tekanan darah sistolik <90 mmHg) atau terapi bersamaan dengan nitrat untuk angina (Berisiko terjadi syok/renjatan kardiovaskular)
Part C: Coagulation system criteria		Bagian C: Kriteria sistem koagulasi	
17	C1 Long-term aspirin at doses greater than 160 mg/day (increased risk of bleeding, no evidence for increased efficacy)	17	C1 Pemberian aspirin jangka panjang dengan dosis lebih besar dari 160 mg/hari (Tidak ada bukti peningkatan manfaat dan berisiko terjadi perdarahan)
18	C2 Aspirin with a past history of peptic ulcer disease without concomitant PPI (risk of recurrent peptic ulcer)	18	C2 Penggunaan aspirin tanpa disertai pemberian PPI (penghambat pompa proton) pada pasien riwayat tukak peptik (Berisiko terjadi kekambuhan tukak peptik)
19	C3 Aspirin, clopidogrel, dipyridamole, Vitamin K antagonists, direct thrombin inhibitors, or factor Xa inhibitors with concurrent significant bleeding risk, i.e., uncontrolled severe hypertension, bleeding diathesis, and recent nontrivial spontaneous bleeding (high risk of bleeding)	19	C3 Aspirin, klopidogrel, dipiridamol, antagonis vitamin K, penghambat thrombin langsung atau penghambat faktor Xa, digunakan pada pasien yang berisiko tinggi perdarahan (misalnya hipertensi berat belum terkendali, <i>diathesis</i> hemoragik, dan perdarahan spontan). (Berisiko tinggi terjadi perdarahan). Contoh: • antagonis vitamin K: Acenocoumarol, Phenindione, Warfarin sodium (The British National Formulary ed. 74, 2018, p. 134) • penghambat thrombin langsung: Argatroban monohydrate, Dabigatran etexilate, Bivalirudin (The British National Formulary ed. 74, 2018, p. 130-131) • penghambat faktor Xa: Fondaparinux sodium, Rivaroxaban (The British National Formulary ed. 74, 2018, p. 123-124)
20	C4 Aspirin plus clopidogrel as secondary stroke prevention, unless the patient has a coronary stent(s) inserted in the previous 12 months or concurrent acute coronary syndrome or has a high grade symptomatic carotid arterial stenosis (no evidence of added benefit over clopidogrel monotherapy)	20	C4 Aspirin digunakan bersamaan dengan klopidogrel untuk pencegahan stroke berulang, kecuali jika pasien memiliki stent jantung koroner (satu atau lebih) yang dipasang dalam 12 bulan terakhir atau sedang mengalami sindrom koroner akut atau memiliki stenosis arteri karotid simptomatik tingkat tinggi (Tidak ada bukti manfaat tambahan dibandingkan pemberian monoterapi klopidogrel)

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Pharmacological STOPP version 2 (original) class		Kelas farmakologi	STOPP_INA (the Indonesian versions of STOPP)
<b>Part C: Coagulation system criteria</b>		<b>Bagian C: Kriteria sistem koagulasi</b>	
21	C5 Aspirin in combination with Vitamin K antagonist, direct thrombin inhibitor, or factor Xa inhibitors in patients with chronic atrial fibrillation (no added benefit from aspirin)	21	C5 Kombinasi aspirin dengan antagonis vitamin K, penghambat thrombin langsung atau penghambat faktor Xa pada pasien fibrilasi atrium kronik (Aspirin tidak memberikan manfaat tambahan)
22	C6 Antiplatelet agents with Vitamin K antagonist, direct thrombin inhibitor, or factor Xa inhibitors in patients with stable coronary, cerebrovascular, or peripheral arterial disease (no added benefit from dual therapy)	22	C6 Kombinasi obat antiplatelet dengan antagonis vitamin K, penghambat thrombin langsung atau penghambat faktor Xa pada pasien penyakit jantung koroner, serebrovaskular atau arteri perifer yang stabil (Terapi kombinasi dua obat tidak memberikan manfaat tambahan)
23	C7 Ticlopidine in any circumstances (clopidogrel and prasugrel have similar efficacy, stronger evidence, and fewer side effects)	23	C7 Tiklopidin dibandingkan klopidogrel atau prasugrel dalam kondisi apapun (Klopidogrel dan prasugrel memiliki manfaat yang mirip, bukti lebih kuat, dan efek samping lebih kecil)
24	C8 Vitamin K antagonist, direct thrombin inhibitor, or factor Xa inhibitors for first deep venous thrombosis without continuing provoking risk factors (e.g., thrombophilia) for >6 months (no proven added benefit)	24	C8 Antagonis Vitamin K, penghambat thrombin langsung atau penghambat faktor Xa untuk kejadian pertama trombosis vena dalam/deep venous thrombosis, tanpa memperberat faktor risiko (seperti trombofilia), yang digunakan >6 bulan (Tidak ada bukti manfaat tambahan)
25	C9 Vitamin K antagonist, direct thrombin inhibitor, or factor Xa inhibitors for first pulmonary embolus without continuing provoking risk factors (e.g., thrombophilia) for >12 months (no proven added benefit)	25	C9 Antagonis Vitamin K, penghambat thrombin langsung atau penghambat faktor Xa untuk kejadian emboli paru pertama tanpa memperberat risiko berkelanjutan (misalnya trombofilia), yang digunakan >12 bulan (Tidak ada bukti manfaat tambahan)
26	C10 NSAID and Vitamin K antagonist, direct thrombin inhibitor, or factor Xa inhibitors in combination (risk of major gastrointestinal bleeding)	26	C10 Kombinasi obat anti-inflamatori nonsteroid (OAINS) dan antagonis Vitamin K, penghambat thrombin langsung atau penghambat faktor Xa (Berisiko perdarahan saluran cerna/gastro intestinal tract)
27	C11 NSAID with concurrent antiplatelet agent(s) without PPI prophylaxis (increased risk of peptic ulcer disease)	27	C11 Penggunaan OAINS bersamaan dengan obat antiplatelet tanpa pemberian profilaksis penghambat pompa proton/ PPI (pump proton inhibitors) (Berisiko meningkatkan tukak peptik)
<b>Part D: Central nervous system criteria</b>		<b>Bagian D: Kriteria sistem saraf pusat</b>	
28	D1 TCAs with dementia, narrow angle glaucoma, cardiac conduction abnormalities, prostatism, or prior history of urinary retention (risk of worsening these conditions)	28	D1 Antidepresan trisiklik (TCA) pada pasien demensia, glaukoma, abnormalitas konduksi jantung, prostatisme atau riwayat retensi urin (Berisiko perburukan kondisi tersebut). Contoh: amitriptyline HCl, clomipramine HCl, doxepin, trimipramine
29	D1 Initiation of TCAs as first-line antidepressant treatment (higher risk of adverse drug reactions with TCAs than with SSRIs or SNRIs)	29	D1 Inisiasi antidepresan triksiklik/TCA sebagai lini pertama (TCA berisiko lebih tinggi terjadi reaksi obat tidak dikehendaki dibandingkan SSRI atau SNRI) SSRI: Fluoxetine, paroxetine, fluvoxamine maleate SNRIs: Duloxetine, Venlafaxine
30	D1 Neuroleptics with moderate-marked antimuscarinic/anticholinergic effects (chlorpromazine, clozapine, flupenthixol, fluphenzine, pipothiazine, promazine, and zuclopenthixol) with a history of prostatism or previous urinary retention (high risk of urinary retention)	30	D1 Obat neuroleptik dengan efek antimuskarinik/ antikolinergik moderat (klorpromazin, klozapin, atau flufenzin) dengan riwayat prostatisme atau retensi urin (Berisiko tinggi terjadi retensi urin)
31	D1 SSRIs with current or recent significant hyponatremia, i.e., serum Na <sup>+</sup> <130 mmol/l (risk of exacerbating or precipitating hyponatremia)	31	D1 Penghambat ambilan kembali serotonin selektif (SSRI) pada pasien hiponatremi (yaitu serum Na <sup>+</sup> <130 mmol/L) (Berisiko memperburuk terjadinya hiponatremia)

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Pharmacological STOPP version 2 (original) class		Kelas farmakologi	STOPP_INA (the Indonesian versions of STOPP)
Part D: Central nervous system criteria		Bagian D: Kriteria sistem saraf pusat	
32	D1 Benzodiazepines for $\geq 4$ weeks (no indication for longer treatment; risk of prolonged sedation, confusion, impaired balance, falls, road traffic accidents; all benzodiazepines should be withdrawn gradually if taken for $>4$ weeks as there is a risk of causing a benzodiazepine withdrawal syndrome if stopped abruptly)	32 D1	Penggunaan benzodiazepine $>4$ minggu (tanpa disertai indikasi yang memerlukan pengobatan lebih lama) (Berisiko sedasi berkepanjangan, kebingungan, gangguan keseimbangan, jatuh, atau kecelakaan lalu lintas). Benzodiazepine harus dihentikan secara bertahap/tapering off, jika telah diberikan $>4$ minggu. Penghentian tiba-tiba menimbulkan risiko gejala putus obat
33	D1 Antipsychotics (i.e., other than quetiapine or clozapine) in those with parkinsonism or Lewy body disease (risk of severe extrapyramidal symptoms)	33 D1	Antipsikotik (selain quetiapin atau klozapin) pada pasien dengan parkinsonisme atau penyakit lewy body (Berisiko memperberat gejala ekstra-piramidal)
34	D1 Anticholinergics/antimuscarinics to treat extrapyramidal side effects of neuroleptic medications (risk of anticholinergic toxicity)	34 D1	Antikolinergik/antimuskarinik untuk pengobatan efek samping ekstrapiramidal akibat dari obat neuroleptik (Berisiko meningkatkan toksisitas antikolinergik)
35	D1 Anticholinergics/antimuscarinics in patients with delirium or dementia (risk of exacerbation of cognitive impairment)	35 D1	Antikolinergik/antimuskarinik pada pasien delirium atau demensia (Berisiko meningkatkan kekambuhan gangguan fungsi kognitif)
36	D1 Neuroleptic antipsychotic in patients with BPSD unless symptoms are severe and other nonpharmacological treatments have failed (increased risk of stroke)	36 D1	Antipsikotik neuroleptik pada pasien demensia disertai gangguan perilaku dan kepribadian BPSD, kecuali jika gejalanya berat dan pengobatan nonfarmakologis lainnya tidak berhasil (Berisiko meningkatkan terjadinya stroke)
37	D1 Neuroleptics as hypnotics, unless sleep disorder is due to psychosis or dementia (risk of confusion, hypotension, extrapyramidal side effects, and falls)	37 D1	Obat neuroleptik sebagai zat hipnotik, kecuali pada pasien dengan gangguan tidur yang disebabkan oleh psikosis atau demensia (Berisiko kebingungan, hipotensi, efek samping ekstra-piramidal, dan jatuh)
38	D1 Acetylcholinesterase inhibitors with a known history of persistent bradycardia ( $<60$ beats/min), heart block, or recurrent unexplained syncope or concurrent treatment with drugs that reduce heart rate such as beta-blockers, digoxin, diltiazem, and verapamil (risk of cardiac conduction failure, syncope, and injury)	38 D1	Penghambat asetilkolinestrase untuk pasien dengan riwayat bradikardia persisten ( $<60$ detak/menit), blok jantung, hilang kesadaran/sinkop berulang (yang tidak dapat dijelaskan penyebabnya), atau penggunaan obat yang menurunkan detak jantung secara bersamaan (seperti penyekat beta, digoksin, diltiazem, atau verapamil) (Berisiko gangguan konduksi jantung, sinkop, dan cedera)
39	D1 Phenothiazines as first-line treatment, since safer and more efficacious alternatives exist (phenothiazines are sedative and have significant anti-muscarinic toxicity in older people, with the exception of prochlorperazine for nausea/vomiting/vertigo, chlorpromazine for relief of persistent hiccoughs, and levomepromazine as an anti-emetic in palliative care)	39 D1	Fenotiazin sebagai pengobatan lini pertama. Fenotiazin bersifat sedatif dan mempunyai toksisitas antimuskarinik signifikan pada pasien usia lanjut, kecuali proklorperazin untuk mual/muntah/vertigo, klorpromazin untuk mengatasi cegukan persisten, dan levopromazin sebagai antiemetik pada terapi paliatif
40	D1 Levodopa or dopamine agonists for benign essential tremor (no evidence of efficacy)	40 D1	Levodopa atau agonis dopamin untuk tremor esensial ringan (Tidak ada bukti manfaat)
41	D1 First-generation antihistamines (safer, less toxic antihistamines now widely available)	41 D1	Antihistamin generasi pertama (Tersedia antihistamin yang lebih aman dan kurang toksik) Contoh antihistamin generasi I: Chlorpheniramine, diphenhydramine, dimenhidrinat, propilamin, prometazin
Part E. Renal system criteria		Bagian E. Kriteria sistem ginjal	
42	E1 Digoxin at a long-term dose greater than $125 \mu\text{g/day}$ if eGFR $<30 \text{ ml/min/1.73 m}^2$ (risk of digoxin toxicity if plasma levels not measured)	42 E1	Penggunaan digoksin jangka panjang dengan dosis $>125 \mu\text{g/hari}$ , dan LFG $<30 \text{ ml/min/1.73 m}^2$ (Berisiko toksisitas digoksin jika kadar plasma tidak diukur)
43	E2 Direct thrombin inhibitors (e.g., dabigatran) if eGFR $<30 \text{ ml/min/1.73 m}^2$ (risk of bleeding)	43 E2	Penghambat thrombin langsung (misalnya dabigatran) pada pasien dengan LFG $<30 \text{ ml/min/1.73 m}^2$ (Berisiko terjadi perdarahan)

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Pharmacological STOPP version 2 (original) class		Kelas farmakologi	STOPP_INA (the Indonesian versions of STOPP)
<b>Part E. Renal system criteria</b>		<b>Bagian E. Kriteria sistem ginjal</b>	
44	E3 Factor Xa inhibitors (e.g., rivaroxaban and apixaban) if eGFR <15 ml/min/1.73 m <sup>2</sup> (risk of bleeding)	44	E3 Penghambat faktor Xa (misalnya rivaroksaban, apiksaban) pada pasien dengan LFG <15 ml/min/1.73 m <sup>2</sup> (Berisiko terjadi perdarahan)
45	E4 NSAIDs if eGFR <50 ml/min/1.73 m <sup>2</sup> (risk of deterioration in renal function)	45	E4 OAINS pada pasien dengan LFG <50 ml/min/1.73 m <sup>2</sup> (Berisiko perburukan fungsi ginjal)
46	E5 Colchicine if eGFR <10 ml/min/1.73 m <sup>2</sup> (risk of colchicine toxicity)	46	E5 Kolkisin pada pasien dengan LFG <10 ml/min/1.73 m <sup>2</sup> (Berisiko toksisitas kolkisin)
47	E6 Metformin if eGFR <30 ml/min/1.73 m <sup>2</sup> (risk of lactic acidosis)	47	E6 Metformin pada pasien dengan LFG <30 ml/min/1.73 m <sup>2</sup> (Berisiko asidosis laktat)
<b>Part F: Gastrointestinal system criteria.</b>		<b>Bagian F: Kriteria sistem gastrointestinal</b>	
48	F1 Prochlorperazine or metoclopramide with Parkinsonism (risk of exacerbating Parkinsonian symptoms)	48	F1 Proklorperazin atau metoklopramid pada pasien Parkinson (Berisiko memperburuk gejala Parkinson)
49	F2 PPI for uncomplicated peptic ulcer disease or erosive peptic oesophagitis at full therapeutic dosage for >8 weeks (dose reduction or earlier discontinuation indicated)	49	F2 Penghambat pompa proton dengan dosis terapi penuh selama >8 minggu, untuk penyakit tukak peptik tanpa komplikasi atau esofagitis peptik erosif (Direkomendasikan penurunan dosis atau penghentian lebih dini). Contoh: Omeprazole, lansoprazole, pantoprazole, Esomeprazole
50	F3 Drugs likely to cause constipation (e.g., antimuscarinic/anticholinergic drugs, oral iron, opioids, verapamil, and aluminum antacids) in patients with chronic constipation where nonconstipating alternatives are available (risk of exacerbation of constipation)	50	F3 Penggunaan obat yang menyebabkan konstipasi (misalnya obat antimuskarinik/antikolinergik, preparat besi oral, opioid, verapamil, atau antasida dengan kandungan aluminium) pada pasien dengan konstipasi kronik (Berisiko perburukan konstipasi, karena tersedia obat alternatif yang tidak menimbulkan konstipasi)
51	F4 Oral elemental iron doses greater than 200 mg daily (e.g., ferrous fumarate >600 mg/day, ferrous sulfate >600 mg/day, ferrous and gluconate >1800 mg/day; no evidence of enhanced iron absorption above these doses)	51	F4 Pemberian unsur besi per oral, dengan dosis >200 mg/hari (misal dosis ferro fumarat >600 mg/hari, ferro sulfat >600 mg/hari, ferro glukonat >1800 mg/hari) (Tidak ada bukti peningkatan absorpsi, jika melebihi dosis tersebut diatas)
<b>Part G: Respiratory system criteria</b>		<b>Bagian G: Kriteria sistem pernafasan</b>	
52	G1 Theophylline as monotherapy for COPD (safer, more effective alternative; risk of adverse effects due to narrow therapeutic index)	52	G1 Teofilin sebagai terapi tunggal untuk PPOK (Gunakan alternatif yang lebih aman dan efektif dengan risiko efek yang tidak dikehendaki lebih kecil, karena indeks terapi sempit)
53	G2 Systemic corticosteroids instead of inhaled corticosteroids for maintenance therapy in moderate-severe COPD (unnecessary exposure to long-term side effects of systemic corticosteroids and effective inhaled therapies are available)	53	G2 Pemberian kortikosteroid sistemik untuk terapi pemeliharaan pada PPOK sedang-berat (Berisiko terpapar kortikosteroid sistemik jangka panjang terkait efek samping obat. Terapi kortikosteroid inhalasi yang lebih efektif)
54	G3 Anti-muscarinic bronchodilators (e.g., ipratropium, tiotropium) with a history of narrow angle glaucoma (may exacerbate glaucoma) or bladder outflow obstruction (may cause urinary retention)	54	G3 Bronkodilator anti-muskarinik (misalnya ipratropium, tiotropium) pada pasien riwayat glaukoma sudut sempit. Dapat memperparah glaukoma atau obstruksi aliran kandung kemih (Dapat menyebabkan retensi urin)
55	G4 Benzodiazepines with acute or chronic respiratory failure, i.e., pO <sub>2</sub> <8.0 kPa±pCO <sub>2</sub> >6.5 kPa (risk of exacerbation of respiratory failure)	55	G4 Benzodiazepin dengan kegagalan respirasi akut atau kronik yaitu yaitu pO <sub>2</sub> <8.0 kPa (pO <sub>2</sub> <60.0 mmHg)±pCO <sub>2</sub> >6.5 kPa (pCO <sub>2</sub> >48.75 mmHg). Berisiko memperburuk gagal nafas
56	G5 Nonselective beta-blocker (whether oral or topical for glaucoma) with a history of asthma requiring treatment (risk of increased bronchospasm)	56	G5 Penyekat reseptor beta nonselektif (baik oral maupun topikal untuk glaukoma) pada pasien riwayat asma yang membutuhkan pengobatan (Berisiko meningkatkan spasme bronkus)

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Pharmacological STOPP version 2 (original) class		Kelas farmakologi	STOPP_INA (the Indonesian versions of STOPP)
<b>Part H: Musculoskeletal system criteria</b>		<b>Bagian H: Kriteria sistem muskuloskeletal</b>	
57	H1 NSAID other than COX-2-selective agents with history of peptic ulcer disease or gastrointestinal bleeding, unless with concurrent PPI or H2 antagonist (risk of peptic ulcer relapse)	57	H1 OAINS selain obat COX-2 selektif dengan riwayat tukak lambung atau perdarahan gastrointestinal, kecuali disertai pemberian PPI atau antagonis H2 (Berisiko berulangnya tukak lambung)
58	H2 NSAID with severe hypertension (risk of exacerbation of hypertension) or severe heart failure (risk of exacerbation of heart failure)	58	H2 OAINS dengan hipertensi berat (Berisiko memperberat hipertensi) atau gagal jantung berat (Berisiko memperberat gagal jantung)
59	H3 Long-term use of NSAID (>3 months) for symptom relief of osteoarthritis pain where paracetamol has not been tried (simple analgesics preferable and usually as effective for pain relief)	59	H3 Penggunaan OAINS jangka panjang (>3 bulan) untuk meredakan gejala nyeri osteoarthritis, sedangkan parasetamol belum digunakan (Analgetik ringan lebih dipilih dan sama efektifnya untuk mengatasi nyeri)
60	H4 Long-term corticosteroids (>3 months) as monotherapy for rheumatoid arthritis (risk of systemic corticosteroid side effects)	60	H4 Penggunaan kortikosteroid jangka panjang (>3 bulan) sebagai terapi tunggal artritis rematoid (Berisiko terjadi efek samping dari kortikosteroid sistemik)
61	H5 Corticosteroids (other than periodic intra-articular injections for monoarticular pain) for osteoarthritis (risk of systemic corticosteroid side effects)	61	H5 Kortikosteroid (selain penggunaan periodik injeksi intra-artikular untuk rasa nyeri mono-artikular) pada osteoarthritis (Berisiko efek samping kortikosteroid sistemik)
62	H6 Long-term NSAID or colchicine (>3 months) for chronic treatment of gout where there is no contraindication to a xanthine-oxidase inhibitor (e.g., allopurinol and febuxostat) (xanthine-oxidase inhibitors are first choice prophylactic drugs in gout)	62	H6 Penggunaan OAINS atau kolkisin jangka panjang (>3 bulan) untuk pengobatan gout kronik. (Obat profilaksis lini pertama untuk gout/pirai adalah penghambat xantin oksidase (misalnya: allopurinol atau febuxostat)
63	H7 COX-2-selective NSAIDs with concurrent cardiovascular disease (increased risk of myocardial infarction and stroke)	63	H7 OAINS COX-2 selektif disertai penyakit kardiovaskular (Berisiko meningkatkan infark miokard dan stroke)
64	H8 NSAID with concurrent corticosteroids without PPI prophylaxis (increased risk of peptic ulcer disease)	64	H8 Penggunaan OAINS dan kortikosteroid secara bersamaan, tanpa pemberian profilaksis penghambat pompa proton/PPI (Berisiko meningkatkan tukak peptik)
65	H9 Oral bisphosphonates in patients with a current or recent history of upper gastrointestinal disease, i.e., dysphagia, oesophagitis, gastritis, duodenitis, or peptic ulcer disease, or upper gastrointestinal bleeding (risk of relapse/exacerbation of oesophagitis, esophageal ulcer, and esophageal stricture)	65	H9 Bifosfonat oral pada pasien dengan riwayat atau sedang mengalami penyakit gastrointestinal bagian atas (seperti disfagia, esofagitis, gastritis, duodenitis, dan penyakit tukak peptik) atau perdarahan gastrointestinal bagian atas (Berisiko memperburuk esofagitis, tukak esofagus, atau penyempitan esofagus)
<b>Part I: Urogenital system criteria</b>		<b>Bagian I: Kriteria sistem genitourinari</b>	
66	I1 Antimuscarinic drugs with dementia, or chronic cognitive impairment (risk of increased confusion and agitation) or narrow-angle glaucoma (risk of acute exacerbation of glaucoma), or chronic prostatism (risk of urinary retention)	66	I1 Obat antimuskarinik disertai demensia, atau penurunan kemampuan faal kognitif kronik (Berisiko meningkatkan demensia atau agitasi), atau glaukoma sudut sempit (Berisiko memperburuk glaukoma akut), atau prostatisme kronis (Berisiko retensi urin)
67	I2 Selective alpha-1 selective alpha-blockers in those with symptomatic orthostatic hypotension or micturition syncope (risk of precipitating recurrent syncope)	67	I2 Penghambat selektif alfa-1 pada pasien hipotensi ortostatik simptomatik atau hilang kesadaran/sinkop mikturisi (Berisiko sinkop berulang) Contoh Penghambat selektif alfa-1: Terazosin, doxazosin
<b>Part J: Endocrine System Criteria</b>		<b>Bagian J: Kriteria Sistem Endokrin</b>	
68	J1 Sulphonylureas with a long duration of action (e.g., glibenclamide, chlorpropamide, and glimepiride) with type 2 diabetes mellitus (risk of prolonged hypoglycemia)	68	J1 Sulfonilurea dengan durasi kerja panjang (misalnya glibenklamid, klorpropamid) pada pasien diabetes mellitus tipe 2 (Berisiko hipoglikemi berkepanjangan, risiko lebih rendah pada glimepirid)

Contd...

Supplement Table 1: Contd...

Pharmacological STOPP version 2 (original) class		Kelas farmakologi	STOPP_INA (the Indonesian versions of STOPP)
<b>Part J: Endocrine System Criteria</b>		<b>Bagian J: Kriteria Sistem Endokrin</b>	
69	J2 Thiazolidinediones (e.g., rosiglitazone and pioglitazone) in patients with heart failure (risk of exacerbation of heart failure)	69	J2 Tiazolidindion (misalnya: pioglitazon) pada pasien gagal jantung (Berisiko memperparah kondisi gagal jantung)
70	J3 Beta-blockers in diabetes mellitus with frequent hypoglycemic episodes (risk of suppressing hypoglycemic symptoms)	70	J3 Penyekat beta nonselektif pada pasien diabetes mellitus yang sering mengalami episode hipoglikemi (Berisiko menutupi gejala hipoglikemi) Contoh beta-blocker nonselektif: Propranolol, timolol maleat
71	J4 Estrogens with a history of breast cancer or venous thromboembolism (increased risk of recurrence)	71	J4 Estrogen pada pasien riwayat kanker payudara atau tromboemboli vena (Berisiko meningkatkan kekambuhan)
72	J5 Oral estrogens without progestogen in patients with intact uterus (risk of endometrial cancer)	72	J5 Estrogen oral tanpa progestogen pada pasien dengan uterus utuh (Berisiko kanker endometrium)
73	J6 Androgens (male sex hormones) in the absence of primary or secondary hypogonadism (risk of androgen toxicity; no proven benefit outside of the hypogonadism indication)	73	J6 Androgen (hormon seks pria) tanpa adanya hipogonadisme primer atau sekunder (Tidak ada bukti manfaat jika digunakan di luar indikasi hipogonadisme dan berisiko toksisitas androgen)
<b>Part K: Drugs predicted to increase fall risk in the elderly</b>		<b>Bagian K: Obat-obat yang Diprediksi Meningkatkan Risiko Jatuh</b>	
74	K1 Benzodiazepines (sedative, may cause reduced sensorium, impair balance)	74	K1 Benzodiazepin sebagai sedative (Dapat menyebabkan penurunan sensorik, dan mengganggu keseimbangan) Contoh: Flurazepam, Loprazolam, Nitrazepam
75	K2 Neuroleptic drugs (may cause gait dyspraxia, Parkinsonism)	75	K2 Obat-obat neuroleptik (Dapat mengakibatkan dispraksia dan perubahan gaya berjalan, Parkinsonisme)
76	K3 Vasodilator drugs (e.g., alpha-1 receptor blockers, calcium channel blockers, long-acting nitrates, ACE inhibitors, and angiotensin I receptor blockers) with persistent postural hypotension, i.e., recurrent drop in systolic blood pressure $\geq 20$ mmHg (risk of syncope and falls)	76	K3 Obat-obat vasodilator (misalnya: penyekat reseptor alfa-1, penyekat kanal kalsium, nitrat kerja panjang, penghambat ACE, penyekat reseptor angiotensin I) pada pasien hipotensi postural yang menetap (misalnya, penurunan tekanan darah sistolik $\geq 20$ mmHg yang berulang) (Berisiko terjadi sinkop dan risiko terjatuh)
77	K4 Hypnotic Z-drugs, e.g., zopiclone, zolpidem, and zaleplon (may cause protracted daytime sedation, ataxia)	77	K4 Obat-obat hipnotik berawalan Z (misalnya zolpidem) (Dapat menimbulkan sedasi berkepanjangan di siang hari, dan ataksia)
<b>Part L: Analgesic drugs</b>		<b>Bagian L: Obat-obat Analgesik</b>	
78	L1 Use of oral or transdermal strong opioids (morphine, oxycodone, fentanyl, buprenorphine, diamorphine, methadone, tramadol, pethidine, and pentazocine) as first-line therapy for mild pain (WHO analgesic ladder not observed)	78	L1 Penggunaan opioid kuat (misalnya: morfin, oksikodon, fentanil, buprenorfin, diamorfin*, metadon, tramadol, petidin, dan pentazosin), baik oral maupun transdermal sebagai terapi lini pertama untuk nyeri ringan (Mengabaikan tangga analgesik/manajemen nyeri dari WHO)
79	L2 Use of regular (as distinct from PRN) opioids without concomitant laxative (risk of severe constipation)	79	L2 Penggunaan opioid secara reguler (bukan/PRN) tanpa pemberian laksatif pada waktu bersamaan (Berisiko konstipasi berat)
80	L3 Long-acting opioids without short-acting opioids for breakthrough pain (risk of persistence of severe pain)	80	L3 Opioid kerja panjang tanpa opioid kerja singkat untuk nyeri hebat (Berisiko nyeri berat berkelanjutan)
<b>Part M: Antimuscarinic/anticholinergic drugs</b>		<b>Bagian M: Obat Antimuskarinik/antikolinergik</b>	
81	Concomitant use of two or more drugs with antimuscarinic/anticholinergic properties (e.g., bladder antispasmodics, intestinal antispasmodics, TCAs, and first-generation antihistamines) (risk of increased antimuscarinic/anticholinergic toxicity)	81	Penggunaan bersamaan dua obat atau lebih dengan sifat antimuskarinik/antikolinergik (misalnya: antispasmodik kandung kemih, antispasmodik saluran cerna, antidepresan trisiklik, atau antihistamin generasi pertama) (Berisiko meningkatnya efek samping antimuskarinik/antikolinergik)

STOPP=Screening Tool of Older People's Prescriptions, NSAIDs=Nonsteroidal anti-inflammatory drugs, SSRIs=Selective serotonin reuptake inhibitors, ACE=Angiotensin-converting enzyme, NYHA=New York Heart Association, ACEIs=Angiotensin-converting enzyme inhibitors, ARBs=Angiotensin II receptor blockers, PPI=Proton-pump inhibitor, TCAs=Tricyclic antidepressants, BPSD=Behavioral and psychological symptoms of dementia, eGFR=Estimated glomerular filtration rate, COPD=Chronic obstructive pulmonary disease, COX-2=Cyclooxygenase, OAINS=Obat anti-inflamatori nonsteroids, SNRIs=Sertraline noradrenaline reuptake inhibitors, LFG=Laju Filtrasi Glomerulus, PPOK=Penyakit paru obstruktif kronis, PRN=Pro re nata, INA=The Indonesia version of STOPP criteria