

Appendices

Supplementary Table 1. Study population with inclusion and exclusion criteria

Study population	Cohort 1 (Remote monitoring program (RMP): Satelia® Cardio) <i>Système National des Données de Santé</i> (SNDS)	Cohort 2 (Standard of care), without remote monitoring program use (service codes 1174/1172/3593)
Eligibility/Extraction Criteria	<p>Eligible patients are all patients, adults (> 18 years), with HF between August 1st, 2018 and December 31, 2021.</p> <p>i) an LTI for HF, hypertensive heart disease with HF, hypertensive cardio-nephropathy with HF or unspecified, cardiac liver or pulmonary edema (ICD-10: I50, I11.0, I13.0, I13.2, I13.9, K76.1 and J81) on 12/31 of year <i>n</i>,</p> <p>ii) or a hospital stay year <i>n</i> for any reason with an AD or RD of HF (ICD-10: I50), iii) a hospital stay for years <i>n</i> to <i>n-4</i> with HF (ICD-10: I50) in PD</p> <p>iii) with a PD for hypertensive heart disease with HF, hypertensive cardio-nephropathy with HF or unspecified, cardiac liver or pulmonary edema with an AD or RD of HF (CIM-10 AD or RD = I50 AND PD=I11.0, I13.0, I13.2, I13.9, K76.1 and J81</p> <p>iv) a dispensation of a beta-blocker or an anti-aldosterone</p>	
Inclusion criteria	<p>All eligible adult patients, covered by all health insurance plans:</p> <p>i) having been hospitalized for HF between 1st August 2018 and April 15, 2020</p> <p>ii) having been hospitalized for HF or treated for HF between April 15, 2020 and December 31, 2021</p> <p>They were categorized as follows between August 1, 2018 and December 31, 2021:</p> <p>Strict definition:</p> <p>i) Hospital stays in year <i>n</i> with a PD for HF (PD = I50)</p> <p>ii) with a PD for hypertensive heart disease with HF, hypertensive cardio-nephropathy with HF or unspecified, cardiac liver</p> <p>iii) pulmonary edema with an AD or RD of HF (ICD-10 AD or RD = I50 AND PD=I11.0, I13.0, I13.2, I13.9, K76.1 and J81 and PD from the stays table (B) and the RUM)</p> <p>Expanded definition: hospital stays in year <i>n</i> with a RD/AD for HF (I50)</p> <p>From April 2020, following the outbreak of SARS-CoV2, the eligibility criteria for the system evolved (i.e. not reduced to hospitalization):</p>	

	<p>i) a dispensation of the following medicinal combinations only between April 15, 2020 and December 31, 2022: enzyme-converting enzyme inhibitors (ACEI) or angiotensin II antagonists (ARA2) or Sacubitril/Valsartan, combined with a beta-blocker (BB)</p> <p>ii) enzyme converting enzyme inhibitors (ACE inhibitors) or angiotensin II antagonists (ARA2) or Sacubitril/Valsartan, combined with a beta-blocker (BB) and a mineralocorticoid receptor antagonist (MRA).</p>
Exclusion criteria	<p>Patients meeting at least one of the criteria below were identified and described but excluded from the study population:</p> <p>i) Patients with SNDS data that were inconsistent, incomplete or made it impossible to identify reimbursements for healthcare consumption (including fictitious pseudoNIR (anonymized identification number) and twins).</p> <p>ii) Patients affiliated in the DOM-TOM or in Mayotte (due to certain variables, such as LTI or vital status, were not well defined and/or defined with a long delay). Patients with severe hepatic impairment</p>

AD: associated diagnosis, RD: related diagnosis; HF: heart failure, ICD-10; International Classification of Diseases, 10th revision; LTI; long-term illness; PD; principal diagnosis.

Supplementary Table 2. Distribution of patients according to year of index date and type of inclusion criteria in the remote monitoring program group and standard of care group

	RMP group* (n=5,357)	SoC group (n=29,808)	Overall (n=35,165)
Year of index date for analyzable patients, n (%)			
<i>2017</i>	3 (0.1)	0 (0.0)	3 (0.0)
<i>2018</i>	146 (2.7)	852 (2.9)	998 (2.8)
<i>2019</i>	971 (18.1)	5,379 (18.0)	6,350 (18.1)
<i>2020</i>	2,158 (40.3)	11,982 (40.2)	14,140 (40.2)
<i>2021</i>	2,079 (38.8)	11,595 (38.9)	13,674 (38.9)

RMP; remote monitoring program, SoC; standard of care, HF; heart failure

Supplementary Table 3. Distribution of patients according to deprivation index and type of inclusion criteria in the remote monitoring program group and standard of care group

	RMP group* (n=5,357)	SoC group, (n=29,808)	SD*
Deprivation index N (%) or %	4915	27672	
1-Wealthy municipality	754 (14.1)	3743 (12.6)	0.045
2	984 (18.4)	4613 (15.5)	0.077
3	1140 (21.3)	5373 (18.0)	0.082
4	1021 (19.1)	6446 (21.6)	-0.064
5-Deprived municipality	1016 (19.0)	7497 (25.2)	-0.15
Missing	442 (8.3)	2136 (7.2)	0.041

Appendix

List of the participating centers:

Clinique Esquirol Saint Hilaire, Agen, (H. Lemieux), Centre Hospitalier Agen Nérac, Agen, (A. Cracan), Hôpital privé d'Antony, Antony, (C. Carville), Centre Hospitalier en Gascogne, Auch, (C. Maris), Centre Hospitalier, Avignon, (S. Cheggour), Centre Hospitalier Montargis, Amilly, (A. Djandjo), Cabinet de cardiologie, Anzin, (S. Caudmont), Cabinet de Cardiologie, Arcachon, (J. Dupas), C.H.R Metz-Thionville, Ars-Laquenexy, (M. Wohl), Centre Hospitalier, Auxerre, (M. Moalla), Centre Bois Gibert, Ballan Mire, (C. Triantafyllou), Centre Hospitalier de la Côte Basque, Bayonne, (J. Berneau), Polyclinique Bordeaux Nord Aquitaine, Bordeaux, (E. Harcaut), Cabinet Médical, Bordeaux, (F. Duhoux), Polyclinique Jean Villar, Bruges, (V. Gratadour-Bernard), Centre de Cardiologie du Pays Basque, Bayonne, (S. Urdampilleta), Hospices Civils de Beaune, Beaune, (R. Duvernay), CHU Jean Mermoz, Besançon, (M. Seronde), Centre de Cardiologie Saint-Vincent, Besançon, (E. Laurent), Clinique Bordeaux Tivoli-Ducos, Bordeaux, (C. Loizeau), Polyclinique du Parc, Cholet, (F. Viera), Cabinet Médical, Carquefou, (T. Garban), CHI Nord Ardennes, Charleville-Mézières, (P. Faroux), Cabinet de Cardiologie, Cluses, (P. Montant), Centre Hospitalier, Compiègne, (J. Clerc), Centre Hospitalier, Douai Cedex, (S. Porouchani), CHU, Dijon, (JC. Eicher), Cabinet de Cardiologie, Dijon, (N. Maillot), Cabinet Médical, Dole, (G. Napporn), Cabinet Médical, Draguignan, (P. Longere), Centre Hospitalier, Fougères, (B. M'ban), Centre Hospitalier, Grasse, (B. Petit), Centre Claude Bernard, Paris, (N. Richet), Centre Hospitalier, Guéret, (L. Mansour), Cabinet Médical, Haguenau, (H. Kremer), Centre Hospitalier St Omer, Helfaut, (C. Debove), Centre Hospitalier, Joigny (Y. Morvan), Centre Hospitalier, Jonzac, (H. Benchimol), GH Nord Essonne, Juvisy sur orge, (P. Maribas), CHU, Kremlin Bicêtre, (N. Hrynchyshyn), Cabinet de Cardiologie Beauregard, La Rochelle (P. Durandet), Cabinet de Cardiologie SCM, La Rochelle, (V. Wilhelm), Hôpitaux La Rochelle-Ré Aunis, La Rochelle, (T. Verrez), Cabinet de Cardiologie, Langres, (J. Mouallem), Centre de Rééducation Avicenne, Libourne, (F. Bire), Cabinet de Cardiologie, Lille, (S. Boule), Cabinet de Cardiologie des Pyrénées, Lons, (P. Marine), Centre Cardiologique de l'Ouest Lyonnais, Lyon, (C. Beclé), Hôpital Saint Joseph Saint Luc, Lyon, (N. Bihry), Centre médical, La Ciotat, (F. Quennelle), CHD Vendée, La Roche sur Yon, (G. Turlotte), Cabinet de Cardiologie, Le Cateau Cambrésis, (L. Avez), Hôpital André Mignot, Le Chesnay, (JL. Georges), Centre Hospitalier, Le Mans, (M. Amelot), Hôpital Marie Lannelongue, Le Plessis Robinson, (D. Blanchard), Cabinet de Cardiologie, Le Quesnoy, (S. Tondeux), Clinique Chirurgicale du Libournais, Libourne, (R. Chreih), Centre Hospitalier Robert Boulin, Libourne, (J. Perron), Cabinet de cardiologie Intercard, Lille, (G. Vaksmann), Intercard - Cabinet Vendôme, Lille, (N. Chebahi), CHU Dupuytren, Limoges, (P. Bonnaud), Cabinet de Cardiologie, Mont de Marsan, (J. Richard), Clinique du Pont de Chaume, Montauban, (J. Labarre), Grand Hôpital de l'Est Francilien, Meaux, (S. Perna), Clinique Du Sport, Mérignac, (J. Jaussaud), Hôpital-Clinique Claude Bernard, Metz, (A. Hueber), Cabinet de Cardiologie, Montbeliard, (T. Mouhat), Cabinet Médical, Montchanin, (A. AbouChraa), GHI Le Raincy, Montfermeil, (W. Amara), Cabinet de cardiologie, Montigny-lès-Metz, (S. Lonescu), Centre Hopistalier, Montluçon, (A. Mischie), Clinique Kennedy, Montélimar, (J. Rodzik), Cabinet Médical, Montélimar, (R. Makhoul, C. Bouya), Centre Hospitalier, Mâcon, (G. Alan), Cabinet de cardiologie, (A. Rischner), CHU, Nancy, (N. Girerd), Cardiovasculaire de l'Est, Nancy, (A. Olivier), Cabinet de Cardiologie, Nantes, (J. Gueffet), Cabinet Médical, Oloron Sainte Marie, (M. Abinader), Hôpital Paris Saint-Joseph, Paris, (A. Jagu), CHU Haut Lévêque, Pessac, (S. Lafitte), Cabinet Médical, Pessac, (M. Marazanof), Cabinet Médical, Poitiers, (B. Gellen), Cabinet de cardiologie, Puteaux, (A. Tritar), APHP Hôpital Cochin, Paris, (M. Saadi), Clinique du Mont Louis, Paris, (G. Schoukroun), Centre Hospitalier, Pau Cedex, (R. Boulestreau), CHU Haut Lévêque, Pessac, (F. Picard), Hôpital Novo, Pontoise, (A. Briedj), Clinique Cardiocéan, Puilboreau, (H. Aouchiche), Hôpital Claude Galien, Quincy-sous-Sénart, (B. Assous), Cabinet Médical, Roubaix, (H. Cordova), Centre Hospitalier, Rambouillet, (T. Trimeche), Polyclinique St Laurent, Rennes, (N. Coquerel), Cabinet de Cardiologie, Roanne, (M. Mteirek), Cabinet de Cardiologie, Rochefort, (M. Bourrat), CHU Charles Nicolle, Rouen

Cedex, (C. Fauvel), Centre Hospitalier, Royan, (H. Benchimol), CHU Bellepierre, La Réunion (J. Corre), Cabinet de Cardiologie, Saint Raphaël, (JP. Van de Walle), Centre Hospitalier, Selclin, (C. Cordier), Centre Hospitalier, Sens, (D. Pacaud, K. Barbis), Cabinet de Cardiologie, Saint Avold, (P. Bliscaux), Cabinet de Cardiologie, Saint Grégoire, (M. Khounlaboud), Cabinet de Cardiologie, Saint Maur des Fossés, (F. Hurson), Cabinet Médical, Saint-Palais, (T. Minviole), Centre Hospitalier, Saintes, (H. Benchimol), Cabinet de Cardiologie, Soissons, (A. Foulon), Cabinet de Cardiologie, Somain, (R. Pilato), Cabinet de Cardiologie, Soyaux, (P. Cardinaud), GMS Le Premium, Strasbourg, (F. Zores), Cabinet de Cardiologie, Strasbourg, (J. Muller), Cabinet de Cardiologie de L'Ormeau, Tarbes, (T. Beard), CH Tarbes - Lourdes, Tarbes, (M. Abdennadher), Hôpital Sainte Musse, Toulon, (J. Tartière), Clinique Pasteur, Toulouse, (R. Cassagneau), Cœur de Lorraine, Thionville, (P. Houplon), Cabinet de Cardiologie, Tourcoing, (E. Decoulx), Hôpital Nord Franche-Comté, Trévenans, (E. Dumitriu), Centre Hospitalier, Valence, (M. Lungu), Cabinet de Cardiologie, Valence, (A. Dobocan), Cabinet de Cardiologie, Valenciennes, (M. Pop), Hôpital Privé, Villeneuve d'Ascq, (J. Burdese), Médipôle, Villeurbanne (K. El Khouri), Cardiopôle Centre Léon Blum, Villeurbanne, (H. Bernelin)

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